B. Beach,

Cutting Veneers.

No. 2,340. Patented Nov. 10, 1841.

Fig. 4.

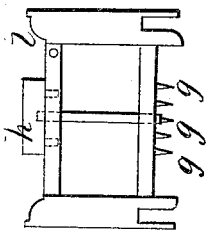

Fig. 1.

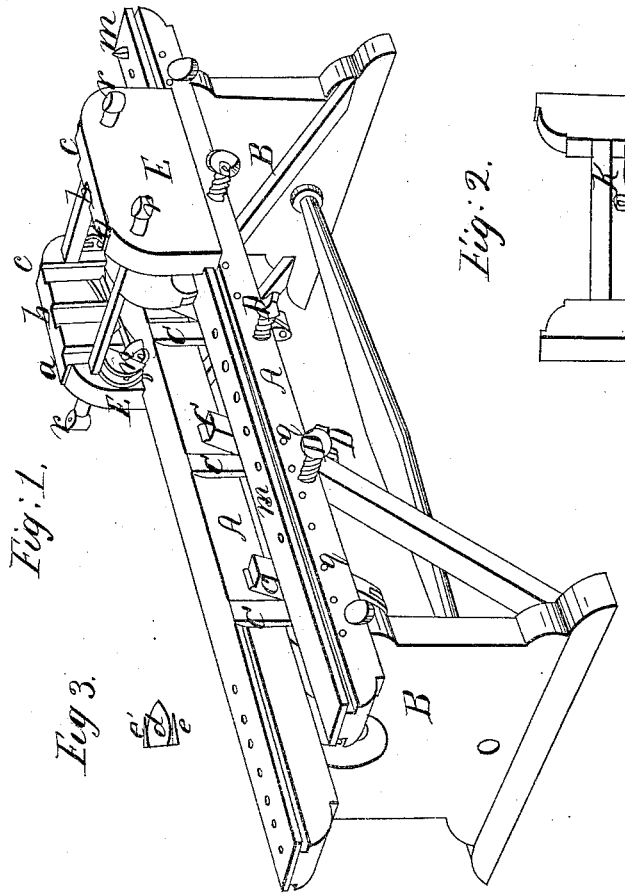

Fig. 2.

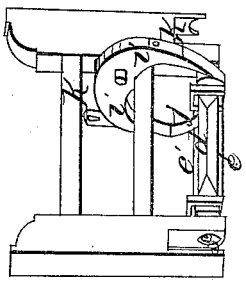

Fig 3.

UNITED STATES PATENT OFFICE.

BENJAMIN BEACH, OF CLARKSVILLE, OHIO.

MACHINE FOR SLITTING TIMBER AND MAKING SPLINTS, LATHS, HOOPS, &c.

Specification of Letters Patent No. 2,340, dated November 10, 1841.

To all whom it may concern:

Be it known that I, BENJAMIN BEACH, of the town of Clarksville, in the county of Clinton and State of Ohio, have invented a new and useful machine for slitting timber, so as to divide the same into splints for the manufacturing of baskets, chair-bottoms, brooms, and all the variety of articles to which splints of various widths are applicable and also for making laths, hoops, rims for sieves, or articles of greater width to which split stuff is applicable; and I do hereby declare that the following is a full and exact description thereof.

When thin splints are to be made for baskets or other similar work, the stuff is first to be rived so as to reduce it into slabs of a proper thickness, and this may be done in the ordinary way, or the machine itself, if made of sufficient size and strength may be adapted to that purpose.

In the accompanying drawing Figure 1, represents the main body of the machine in perspective. A, A, are its two cheeks, or side pieces, firmly attached to the end supports B, B. Between these cheeks the strips of stuff prepared to be made into splints are to be held. For this purpose there are several vices, or clamps C, C, C, the jaws of which are to be forced together by means of screws D, D, D. A sliding carriage is fitted to the cheeks A, A, the sides E, E, of which carriage have on them tongues adapted to grooves on the cheeks, as shown in the drawing. The sliding carriage is to carry the knives and cutters by which the splints are to be formed. These knives and cutters are to be attached to frames which are made to slide up and down in the grooves *a*, *b*, *c*, on the inner faces of the side pieces E, E, of the sliding carriage.

Fig. 2, represents the principal of the sliding frames, on that which carries the knives by which the splints are to be cut from the prepared strips, said frame being adapted to the middle groove *b*, of the sliding carriage. In the lower end of this frame is a stock or shaft *d*, which extends across it, and carries two knives *e*, *e'*, each standing at such distance from the stock *d*, as is equal to the thickness of the intended splint. The stock *d*, is made to revolve on gudgeons *f*, and that for two purposes; the first of which is to allow of its performing a half revolution so as to allow the two knives to operate alternately, so that a splint shall be cut in the motion of the carriage from either end of the machine; the second object is to give free play to each knife during the time that it is in action, so that it may always adapt itself to the direction of the grain of the wood, which is effected in part by this rotation of the stock, and in part by the sliding of the frame in the grooves. The knives and shaft are shown in section in Fig. 3.

Fig. 4, is a second sliding gate, of which there may be two, alike in construction, adapted to the two sets of grooves *a*, and *c*. These are to be used when it is desired to divide the splints into narrow strips, such as are used for the making of brooms; *g*, *g*, *g*, are gage or cutting knives, which are to pass over the strip to be cut, in advance of the rotating knives; these are made to enter to the required depth by means of a weight *h*, at the top of the frame; a similar weight is used on each of the frames, and this may be augmented, or diminished at pleasure.

When the machine is intended to cut in both directions, and the gage knives are to be used, there must, of course, be two such gates as that shown in Fig. 4, and these must be alternately raised and depressed, at the same time that the knives *e*, are made to rotate. This may be effected in various ways which any skilful mechanist can devise. One way in which I have effected this is by attaching a piece of wood or metal, to vibrate on a pin on the inside of the frame Fig. 2, as shown at *i*, and affixing to this a strap *j*, which is fastened to the revolving stock *d;* the ends of this strap, as K, K, are to be attached by a knob or stud to the two outer frames, as at *l*, in Fig. 4; two pins as shown at *m*, *m*, Fig. 1, and which may be shifted at pleasure, strike against an inclined part on the ends of the frames Fig. 4, raising one end and depressing the other, and causing, at the same time, the stock *d*, to rotate. Sometimes I affix two rotating pieces on the inner sides of the cheeks of the carriage E, as shown at *n*, Fig. 1; *o*, is a spring latch which catches in a notch in the piece, and retains it in place, until the spring is brought against a pin which relieves it, and allows the gates to move freely; a strap *p*, fastened to the pieces *n*, is attached at its other end to the outer gates. The holes *q*, *q*, in the sides of the cheeks may receive pins to serve as stops

to the carriage when worked by hand; *r*, *r*, are handles for so working it. When horse, steam, or water power is applied, a crank, or some similar device will be employed, and will determine the length of the traversing motion of the carriages.

With a machine of this description I have, by horse power, cut stuff of fifteen inches in width; and it may be readily made to rive or slit the strips from a log, from which splints are to be made, but this would require a machine of much greater strength than is necessary for ordinary purposes.

Having thus fully described the nature and operation of my machine, what I claim therein as new, and desire to secure by Letters Patent, is—

The attaching of the knife, or knives, by which the stuff is to be cut into splints, laths, or slabs of greater width, for various purposes, upon a vibrating or rotating stock, crossing a frame which slides vertically, so that said knife shall adapt itself, unobstructedly, to the varying direction of the grain of the timber, in the manner herein described. I claim also, in combination therewith, the manner of employing the additional gate, or gates, furnished with cutting gages, or knives by which the splints, or strips, may be reduced to a determinate and regular width, as herein set forth.

BENJAMIN BEACH.

Witnesses:
THOS. P. JONES,
IRA FERRISS.