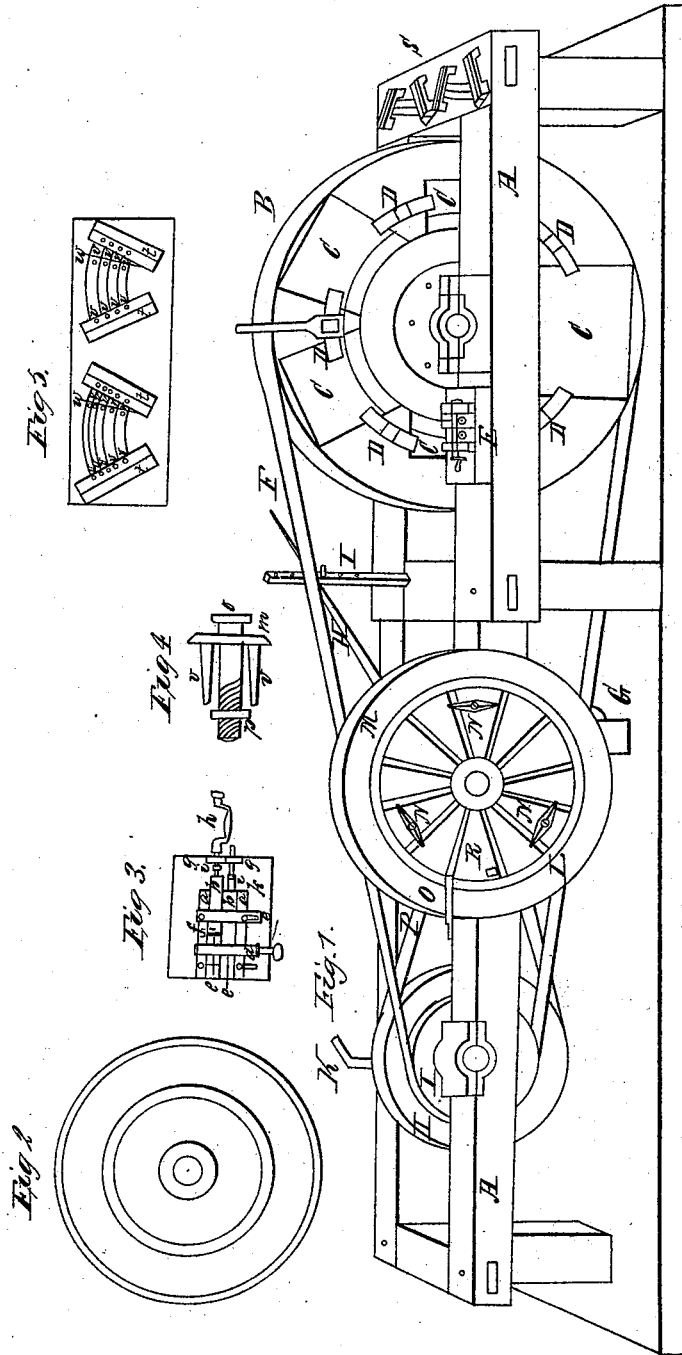


J. Sitton,

Making Fellies.

No. 14,577.

Patented Apr. 1, 1856.



UNITED STATES PATENT OFFICE.

JNO. SITTON, OF WILLIAMSTON, SOUTH CAROLINA.

WHEELWRIGHT-MACHINE.

Specification of Letters Patent No. 14,577, dated April 1, 1856.

To all whom it may concern:

Be it known that I, JOHN SITTON, of Williamston, in the district of Anderson and State of South Carolina, have invented
5 new and useful Improvements in Felly-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this
10 specification, in which—

Figure 1, is a perspective view of the entire machine; Fig. 2, the match wheel to wheel L; Fig. 3, a ground plan of
15 knives and Fig. 4, one of the clamps used in wheel B, and Fig. 5, a ground view of the felly-miter S.

Description of the construction and operation of John Sitton's improved felly machine.

A, A, is a stout frame.

B, is a heavy faced wheel, made strong by flanges on the axle and turned by the
25 belt F, on its periphery. On this wheel the blocks from which the fellies are cut are secured by the clamps D. On both faces of this wheel are blocks so placed thus producing fellies adapted to both fore and
30 hind wheels at the same time.

C, C, C, C, C, are blocks fastened as above.

D, D, D, D, D, are the clamps. These are adjusted by means of a screw-bolt
35 working in to a fixed nut as shown in Fig. 4.

E, are the knives or cutters—two in number, one cutting the inner and the other the outer circle of each felly. These knives are
40 so secured by means of guides, a plate and clamp as to work very exactly. They are run forward and backward by means of a brace in the hands of the operator. One set of these knives is placed against either
45 face of the wheel B. Their position arrangement and operation are shown in Fig. 3.

F is the belt operating wheel B.

G, is a tightening pulley on belt F, operated by the lever H, secured at any required tightness by a pin in the standard I.

I, I, is a double, power wheel operating the belts F, and P, by means of the crank K. To this wheel any power, as steam,
55 water, &c., may be applied for operating the machine. P, operates a shaft or axle

carrying on one end the polishing wheel Fig. 2, and on the other the finishing wheel L.

Fig. 2, is a grooved wheel, in the groove
60 of which is placed any polishing material such as emery &c. for the purpose of polishing the face and inner and outer sides of the fellies—thus obviating the ordinary plan of dressing these sides. The fellies
65 are held in place in this groove by the operator. The outer circle of the groove is as large as the outer circle of the largest sized felly and the inner circle smaller than the inner circle of the smallest size so that the
70 different sizes can be polished in the same groove the operator simply varying their position to suit. L is a smooth, faced wheel on which the carriage or other wheel M, is placed after it is put together secured by
75 the clamps N, N, N. In the face is a stop R, for better securing the wheel by catching a spoke. O, is a rest upon which a gouge or plane is held for the purpose of finishing up the rim of the wheel thus do-
80 ing away with the old and slow method of gaging and cutting down by means of drawing-knife and plane. The center of this wheel is hollowed out sufficiently to allow the hub to enter so that the rim may
85 fit closely against the face. S, is a felly miter for the purpose of measuring and cutting fellies to the proper length thus avoiding further cutting or fitting. Its construction and operation are shown in Fig. 5.
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Fig. 3, is a ground view showing the construction and operation of the knives or cutters E. *a, a*, are guides between which work the knife slides *b, b*. These guides are secured to the block *k*, by screws—one of the
95 guides is adjustable to different depths of fellies. *c* is a plate to secure the slides from rising. *d*, is a clamp for better securing the guides and slides so that they may not vary in operating. *e, e*, are points of the cutters
100 projecting from the slides in which they are secured. They are secured in a groove across which is a cross plate *f*, let in by a dove-tail—which plate catches into a notch
105 in the blade at the end opposite to the cutter thus securing the blade firmly and also an easy removal for sharpening or other purpose. *g, g*, are collars in which work the screws which operate the knife slides. These screws are operated by the brace *h*.
110 *i, i*, are nuts attached to the knife slides, in which the screws work. By operating the

brace *h*, the screw moves the slide forward and backward by means of the nut *i*. The block *K*, on which the knives are secured is adjustable to large or smaller wheels by screw-bolts working in a slit in the main frame.

Fig. 4, is a view of a clamp *D*, in wheel *B*. *m*, is the head of the clamp. *n, n*, are arms projecting from the head and working into holes in the wheel *B*, and holding the clamp in position. *O* is the screw-bolt working through the center of the clamp into the nut *p*, let in firmly on the opposite side of wheel *B*. By means of the screw the clamp is made to secure the timber to be cut, in its place, and after one set of fellies has been cut out the simple loosening of the screws by means of the wrench allows the blocks to be brought into position for the next set when they are again tightened.

Fig. 5, is a ground plan of the felly miter *S*. *T, T, T, T*, are saw-guides so placed that the saw runs on a line to the center of the circle. *U, U, U, U*, are pins, adjustable to any size of wheel, in the holes *V, V, V, V*. The size of wheel is shown by the marked circles on the bottom. The saw-guides are so made that the felly works under them. The felly is put in with its back against the pins and held firmly with the hand while being sawed. The guides are arranged for fellies for wheels of twelve and fourteen spokes—for fourteen and sixteen one end of the felly is sawed as above shown—the felly

is then slipped until the sawed end is on the line *w*, when the other end is sawed. For a greater number of spokes corresponding lines can be easily drawn.

What I claim, and desire to secure by Letters Patent, is

1. The double-faced wheel *B*, working upon an axle, and made strong by flanges on the axle; upon which the blocks, from which the fellies are cut, are secured by the clamps *D*, substantially in the manner and for the purposes herein set forth.

2. The construction, operation and use of the clamps *D* in the manner and for the purpose herein specified.

3. The construction, arrangement and operation of the knives or cutters *E*, in the manner and for the purposes herein set forth.

4. The construction and operation of the grooved wheel, Fig. 2, in the manner and for the purposes herein set forth.

5. The felly-miter *S*, constructed and operating in the manner and for the purposes herein specified.

6. The attachment of a carriage or other wheel *M*, to the finishing wheel *L*, in the manner and for the purposes set forth.

All other parts and operations of the machine I disclaim.

JOHN SITTON.

Witnesses:

W. H. STONE,
F. A. HOKK.