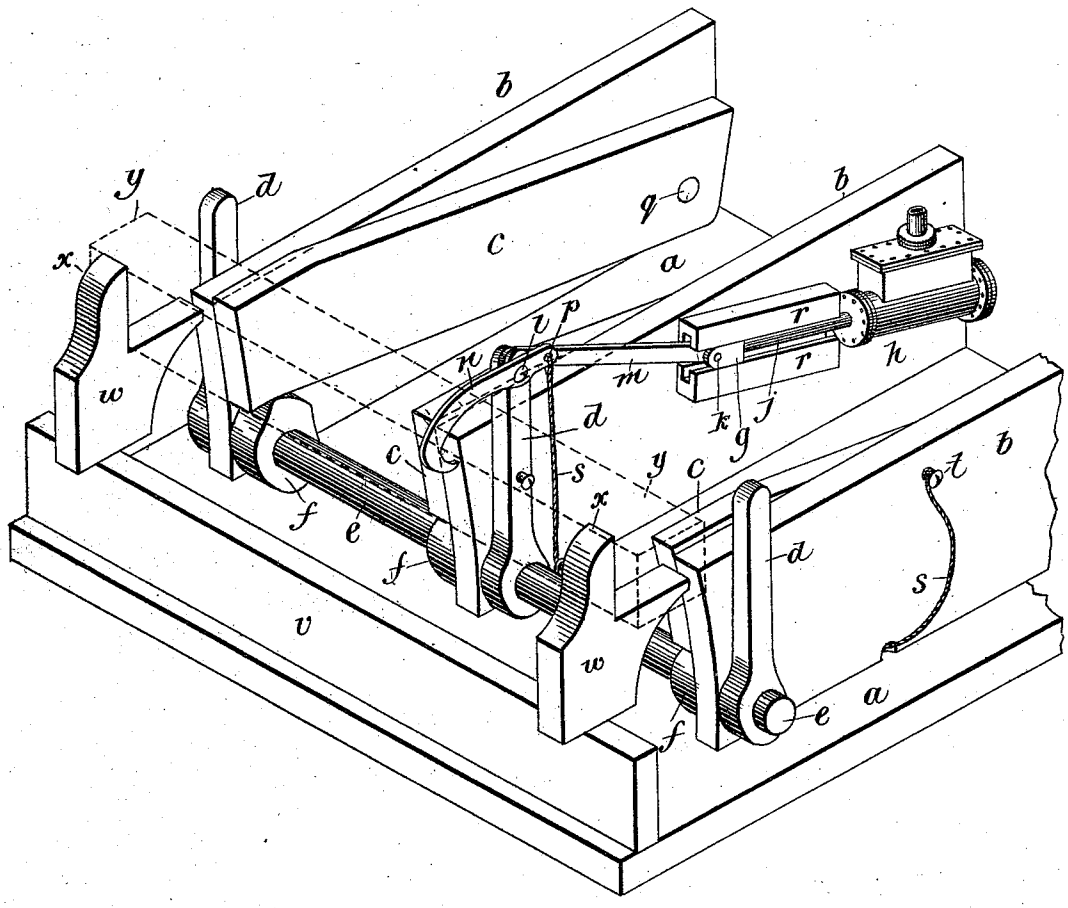
(No Model.)

F. SIMONSON.

LOG LIFTING AND TURNING MACHINE.

No. 408,760. Patented Aug. 13, 1889.



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UNITED STATES PATENT OFFICE.

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LOG LIFTING AND TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 408,760, dated August 13, 1889.

Application filed December 17, 1888. Serial No. 293,929. (No model.)

To all whom it may concern:

Be it known that I, FLAVEL SIMONSON, a citizen of the United States, residing at Batesville, in the county of Independence and State of Arkansas, have invented a new and useful Log-Lifting and Log-Turning Machine, of which the following is a specification.

The object of my invention is, first, to put a log onto the carriage of a saw-mill; second, to turn the log over or partly over while being sawed; third, to slide a square stick or partly square stick onto the carriage after having been turned. I attain these objects by the mechanism illustrated in the accompanying drawing, in which drawing I have shown a perspective view of my invention.

Similar letters refer to similar parts throughout the drawing.

a is the mill-floor; *b*, logways; *c*, log-lifters; *e*, shaft on which arms *d* and eccentrics *f*, that raise log-lifters *c*, are fastened; *q*, pins on which log-lifters *c c c* swing; *t*, pin on side of logways *b*, to which rope *s* is attached; *n*, hook to turn log *y*; *l*, bolt on which hook *n* swings, and which also receives pitman *m*; *p*, hole in hook *n* to attach rope *s*; *m*, pitman of engine *h*; *k*, pin in cross-head *g*; *r r*, guides; *j*, piston-rod of engine *h*; *v*, carriage of saw-mill; *w w*, head-blocks; *x x*, knees of head-blocks; *y y*, log.

Operation: To turn a log, apply steam to the upper end of the engine *h*, which will draw down the arm *d*, carrying the hook *n*, and the hook *n* will pull the log *y* forward until it strikes the log-lifters *c*, and the hook *n* will roll the log *y* forward onto the log-lifters *c*. Then apply steam to the lower end of the engine *h*, and the arms *d* will push the log *y* onto the head-blocks *w* and against the knees *x*. It will be noticed that when the log *y y* is turned forward onto the log-lifters *c* they are raised by the eccentrics *f* above the head-blocks *w*, which admits of the log *y* being shoved back onto the head-blocks *w*. When the log *y* has been turned and shoved back, pull on the rope *s* where it is attached to pin *t* and the hook *n* will be raised so as to clear the log *y y*. Then apply steam to the upper end of the engine *h*, and the arms *d* will be drawn down below the logways *b* and the hook *n* will drop by the side of its arm *d*, and this arm *d* being fastened to the shaft and the other arms being also fastened to the shaft *e* the arms *d* are all drawn below the top of the logways *b*, and the eccentrics *f* being also fast to shaft *e* they are carried back when the shaft *e* turns, causing the log-lifters *c* to also recede by gravitation below the top of the logways *b*. When all the arms *d* and the log-lifters *c* are drawn below the logways *b*, another round log can be rolled over them to a point between where the end of the arms *d* will rise above the top of the logways *b* and head-blocks *w*. To put this round log onto the head-blocks *w*, apply steam to the lower end of the engine *h*, and the arm *d* rising will turn the shaft *e*, which will cause the eccentrics *f* to raise the log-lifters *c* above the top of the logways *b*, carrying the log *y* above the head-blocks *w*, so that the arms *d* can either push or roll the log *y* onto the head-blocks *w*. If it is desired to turn a log and the arms *d* are at rest below the top of the logways *b* and the hook *n* hanging down, first pull on the rope *s* at *t*, and the hook *n* will be raised into the air, so as to clear the log *y*. Then apply steam to the lower end of engine, and the hook *n* will be thrown over the log *y*, and the eccentrics *f* will raise the log-lifters *c*, so as to catch the log *y* as it slides forward and make it turn by the pulling of the hook *n*, as heretofore described.

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

1. In a machine for turning and lifting logs, the combination, with an engine, a rock-shaft, an arm secured to the shaft, a hook pivoted to the free end of the arm, a pitman-rod pivotally connecting the hook with the piston-rod of the engine, and guides *r*, for regulating the direction of movement of the piston-rod, substantially as and for the purpose specified.

2. The combination, in a log lifting and turning machine, of a log-lifter *c*, a rock-shaft *e*, an eccentric *f*, fastened on the shaft for raising the log-lifter, a straight arm *d* on the shaft, and the engine *h*, connected with the arm, substantially as and for the purpose specified.

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