

944,647.

Fig. 1. Fig. 3. 944,647.

Fig. 3.

Fig. 1.

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

REUBEN APPLEMAN, OF LUZERNE, PENNSYLVANIA.

SPRAG-SHAVING MACHINE.

944,647.

Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, REUBEN APPLEMAN, a citizen of the United States, residing at Luzerne, in Luzerne county and State of Pennsylvania, have invented a new and useful Sprag-Shaving Machine, of which the following is a specification.

My invention relates to improvements in manufacturing mine and other sprags, generally used in stopping mine cars in and about the mines, by shaving process, which cuts and sharpens the sprags by means of knives placed horizontally or obliquely or by using knives bent at angle, or curved knives. And the object of my invention is to improve the method of manufacturing sprags by a machine which will produce as good sprags as those made by hand shaving or by hand dressing by ax. I attain this object by mechanism illustrated in the accompanying drawings in which,

Figure 1 is a vertical section of the entire machine, as it appears from a side view. Fig. 2 is the machine as it appears from a top view; and Fig. 3 is the machine as it appears from a front end view.

The device consists of a bed *a*, supported on legs *b*. The drive shaft *d* is carried by journal *f*, on the side of the bed *a*, and journal *f'* which is carried by the bracket *f''*. The drive shaft *d* between the journals *f* and *f'* carries the drive pulley *e*, and the idler pulley *e'*. On the inner end of the drive shaft *d* is attached the crank disk *e'* which carries a pitman *g*. Sliding between the guides *j* and *j'* which are rigidly attached to the bed *a* is a carriage *k* which is attached to the pitman *g* by means of a wrist-pin connection and is adapted to carry the knife blade *i*.

The work feeding mechanism consists of a foot treadle *s*, pivoted at *s'* to the front pair of legs, and attached by means of the links *r* to the vertically reciprocating rod *m*, which is carried by the bracket *n* attached to the bed plate. The bracket *n'* which is attached to the bracket *n* and to the bed *a* is adapted to form an abutment against which the work is held during the cutting action of the horizontal reciprocating blade *i*. An adjustable collar *o* on the rod *m* permits of regulation of the tension

of the spring *p*, whose function is to form a resilient resistance against the operator's foot pressure on the treadle *s* and to return the feeding mechanism to inoperative position. On the upper end or head, of the rod *m* is carried a feeding table or rest *k*. On each side of this table *k* are carried adjusting screws *L* and *L'*, which by contacting with the underside of the bed *a* limits the upward movement of the rest *k*, so that the amount of cutting will be uniform on the various pieces of work.

The operation of the device is as follows: The power wheel *e* being driven by any suitable power, the knife carriage *k*, is accordingly reciprocated between the guides by means of the operative connections to the drive shaft. One end of the work which is to be formed into a sprag, is rested on the feed rest *k*, with its end abutting against the bracket *n'*. The work is held in the operator's hand in a downwardly inclined direction, at the same time the work rest *k* is raised slowly upward by the actuation of the pedal *s* and its connected parts, until the regulating screws *L* and *L'* have contacted with the bed plate. The knife *i* being horizontally reciprocated over the work, shaves it off at an angle determined by the inclination by which the operator holds the work.

It will be readily seen that by means of this device, either wedged shape or conical sprags may be formed according to the manipulation of the work piece by the operator.

I claim as my invention:

1. In a sprag shaving machine, a horizontally reciprocating blade, operating means for said blade, a vertically sliding work rest, a treadle, and operative connections between the said work-rest and said treadle.

2. In a sprag shaving machine, a horizontally reciprocating blade, operating means for said blade, a vertically sliding work rest, means to limit the movement of said work rest, a treadle, and operative connections between the said work rest and the said treadle.

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Witnesses:

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