C. L. JONES, J. W. SMITH & H. H. ADAMS.

Cane-Shaving Machine.

No. 210,945. Patented Dec. 17, 1878.

Fig. 1

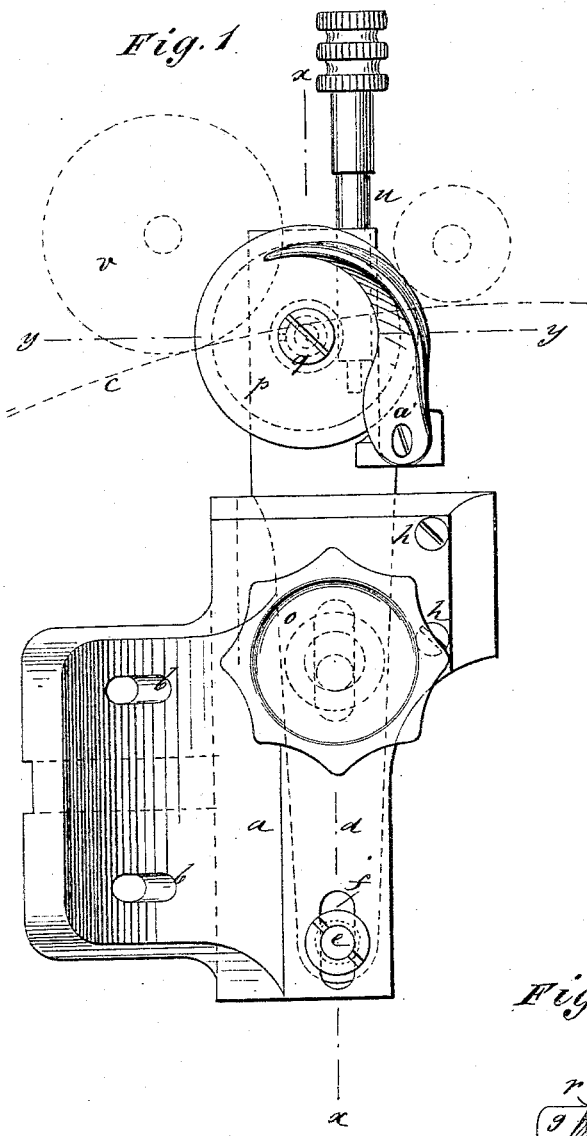


Fig. 2

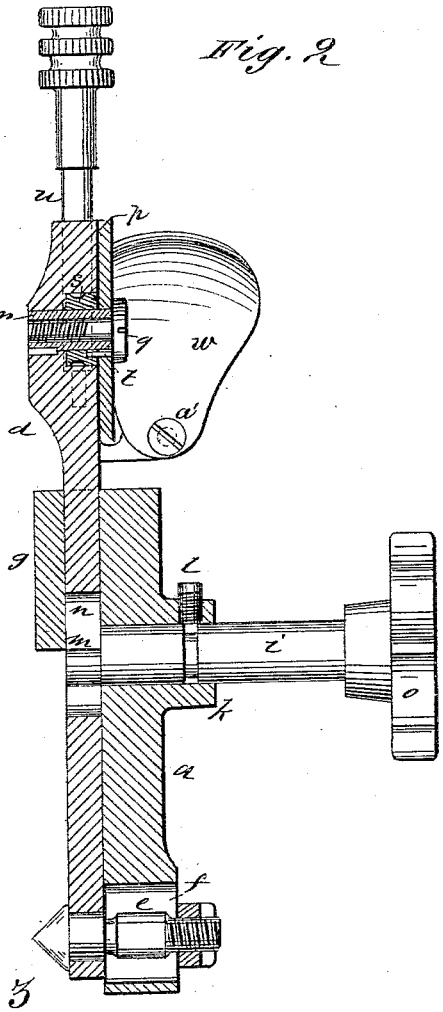
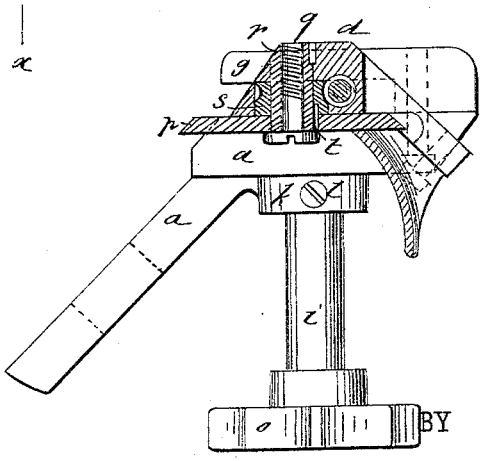


Fig. 3



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UNITED STATES PATENT OFFICE.

CHARLES L. JONES, JAMES W. SMITH, AND HENRY H. ADAMS, OF GARDNER, MASSACHUSETTS.

IMPROVEMENT IN CANE-SHAVING MACHINES.

Specification forming part of Letters Patent No. **210,945**, dated December 17, 1878; application filed August 26, 1878.

To all whom it may concern:

Be it known that we, CHARLES L. JONES, J. W. SMITH, and H. H. ADAMS, of Gardner, in the county of Worcester and State of Massachusetts, have invented a new and Improved Cane-Shaving Machine, of which the following is a specification:

The strands of cane used for cane-bottom chairs are shaved and edged to fit them for use by knives while the cane is passing over a cylinder and under a pressure-roll. The cane passes through between two circular knives that are turned by hand to bring a new part of the knife-edge to the cutting-point when the edge dulls. The devices heretofore made use of to turn the knives are expensive to manufacture, and the feed has to be stopped while the knife is turned.

The object of our invention is to construct a cane-splitting machine that will permit of changing the knives without loss of time, and also to make the knives adjustable according to the size of the cylinder.

Our invention consists in a toothed pinion upon the stud that supports each knife, and a worm, which may be turned to operate the gear and turn the knife. Each knife is mounted near the end of an arm that is hung upon a pin and the arm mold and held in position by a cam on an arbor, so that the knives may be adjusted to and from the cylinder, to compensate for wear of the cylinder and to regulate the width of strand that is cut.

In the accompanying drawing, Figure 1 is an elevation of one knife and its supporting and adjusting devices. Fig. 2 is a longitudinal section of the same at the line *x x*. Fig. 3 is a cross-section at the line *y y*.

Similar letters of reference indicate corresponding parts.

a is a casting that is to be attached by bolts which pass through the slots *b b* to a saddle (not shown) which is attached to a frame in proximity to the cylinder. There is to be a casting, *a*, attached at each side of the cylinder, (shown by dotted line *c* in Fig. 1,) so that there will be a knife at each side.

d is an arm, attached at one end to the casting *a* by a bolt and nut, *e*, which bolt passes through a slot, *f*, in casting *a*, so as to permit the length of the arm *d* to be adjusted. *g* is a plate, attached to the casting *a* by screws *h*, and lapping upon the arm *d* near to its outer end, to hold said arm to the casting.

i is an arbor, held in a hub, *k*, on the face of the casting *a* by a screw-pin, *l*. *m* is an eccentric-pin formed on the inner end of the arbor *i* and entering a slot, *n*, in arm *d*. *o* is a hand-wheel on the outer end of *i*. By turning the hand-wheel *o* the eccentric *m* swings the arm *d* in either direction on its pivot *e*. *p* is a circular knife, attached to the outer end of arm *d* by a stud-pin, *q*, that passes through the sleeve *r*, secured in an arm, *d*, on which sleeve the knife *p* turns. The face of the arm *d* is cut out around the sleeve *r* to form an annular cavity for a small gear, *s*, that is placed upon the sleeve *r*, and is connected to knife *p* by a pin, *t*, so that the knife and wheel *s* turn together. *u* is a worm-shaft, fitted in the end of arm *d*, and engaging with gear *s*. This worm-shaft *u* extends beyond the end of arm *d*, and has an enlarged end, as shown, whereby it may be turned to revolve the knife *s*, and bring any part of the cutting-edge to the cutting-point.

The cane passes over the cylinder *c*, that is the thickness of the strands to be cut, and beneath a pressure-roller, *v*. The position of the knives *p* at each side of the cylinder is such that the cutting-point is on a line from the center of the cylinder *c* to the center of *v*. The operator catches the strand with the left hand, and the right hand is at liberty to operate the worm-shaft *u* and turn the knife on its stud, when it dulls at one point. This may be done at any time without stopping the feed or delaying the work. *w* is a guard for guiding the edgings as they are cut off. It is attached to a projection from arm *d* by a screw, *a'*, so that one edge rests upon the knife *p*.

The swinging arm *d* permits the adjustment of the knife by the cam or eccentric *m* to lower the knives as the cylinder *c* wears smaller. It also allows the width of strand that is cut by the knives to be adjusted quickly and accurately.

We do not limit ourselves to the exact details of construction set forth, as they may be varied without departing from our invention.

The cylinder *c* and rollers *u* and *v* are of the character generally used in cane or rattan working machinery, and the knife-supporting devices are adapted, in the form shown and described, for attachment to any of the well-known cane-shaving machines.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent—

1. The circular knife *p* and adjustable swinging arm *d*, in combination with the casting *a* of a cane-shaving machine, substantially as described.

2. The circular knife *p*, cog-wheel *s*, stud *q*, sleeve *r*, and pin *t*, in combination with the worm-shaft *u*, substantially as and for the purpose described.

3. The arbor *i*, provided with the hand-wheel *o* and the cam *n*, and secured to the hub *k* of the casting *a* by the screw *l*, in combination with the adjustable swinging arm *d*, substantially as and for the purpose described.

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