(153.)

J. DINDINGER & C. HENRI.

Improvement in Stone Sawing Machine.

No. 122,234.

Patented Dec. 26, 1871.

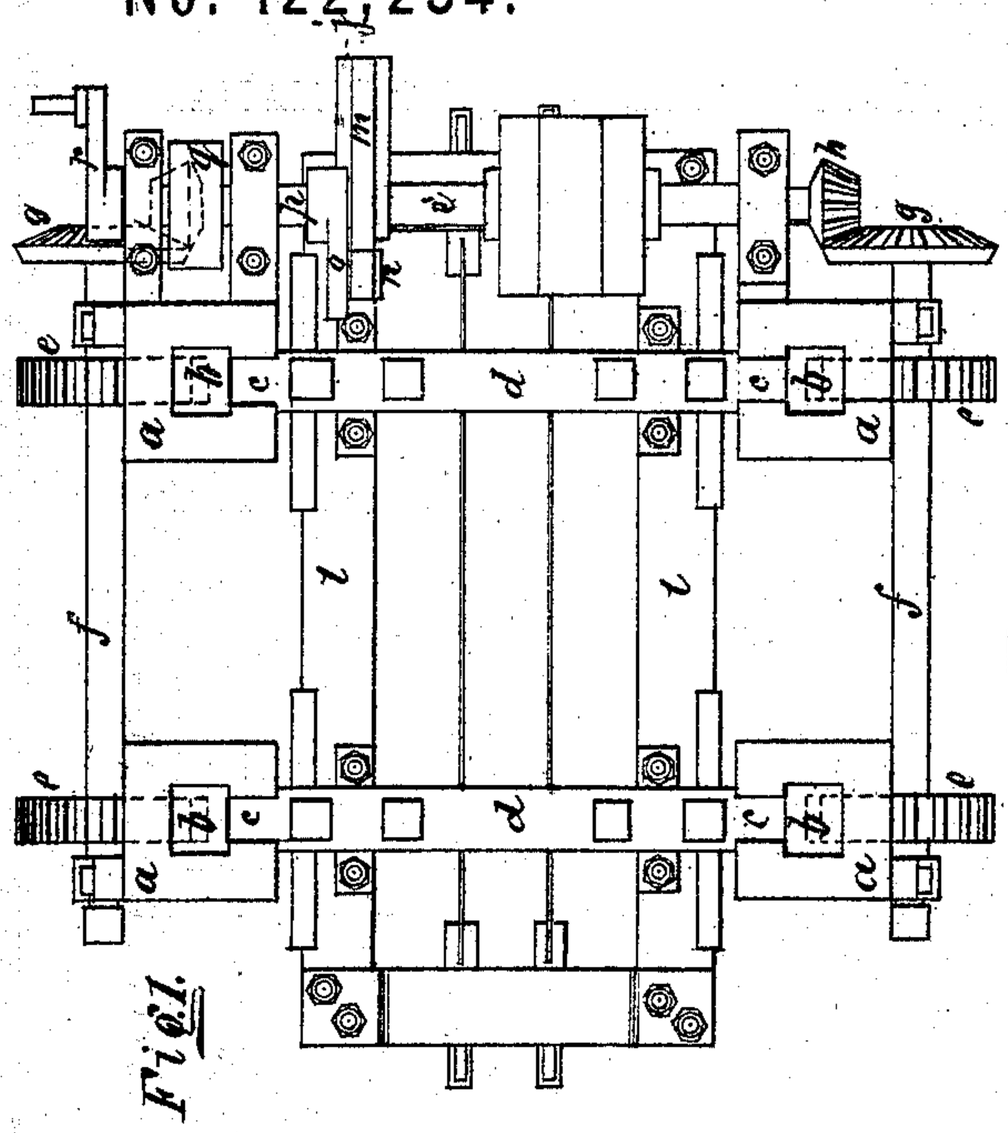

Fig. 1.

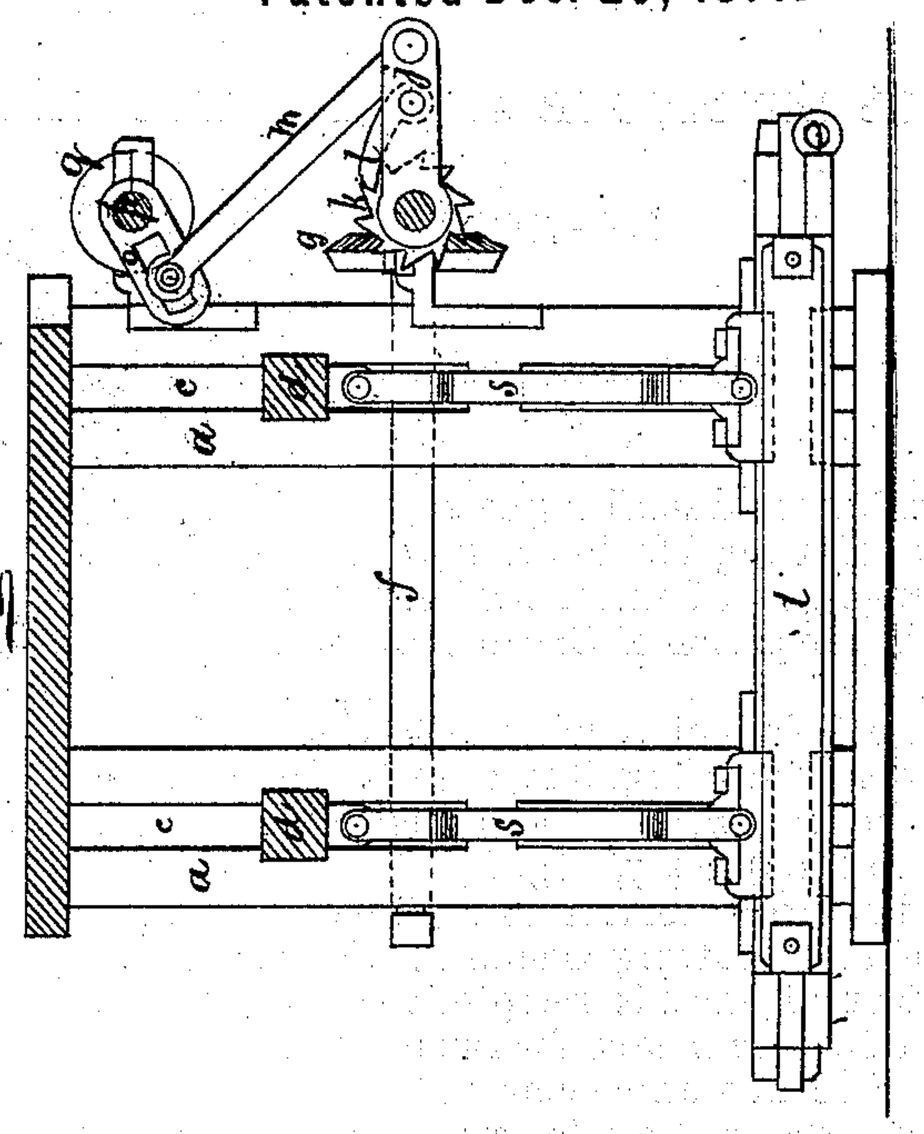

Fig. 2.

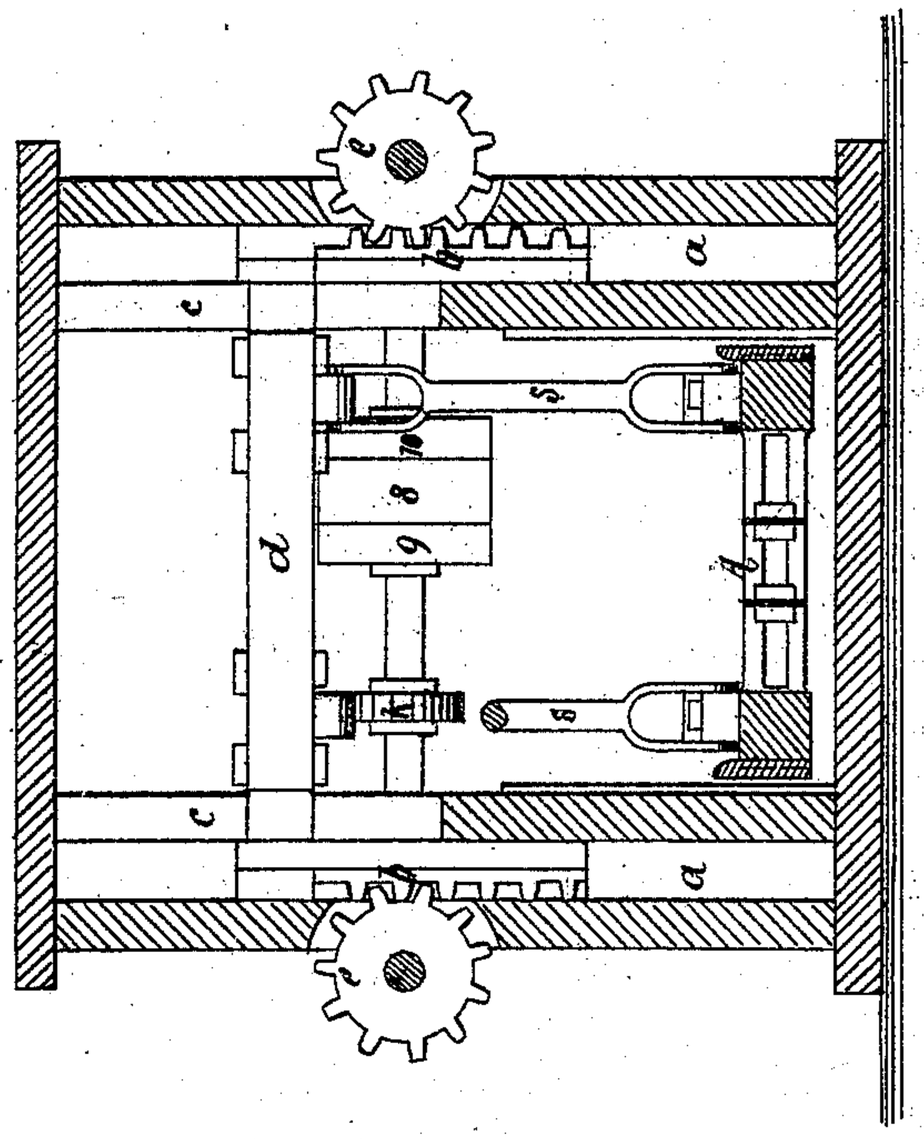

Fig. 3.

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UNITED STATES PATENT OFFICE.

JACOB DINDINGER AND CHRISTIAN HENRI, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN STONE-SAWING MACHINES.

Specification forming part of Letters Patent No. 122,234, dated December 26, 1871.

Specification describing certain Improvements in Stone-Cutting Machines, invented by JACOB DINDINGER and CHRISTIAN HENRI, of New Orleans, in the parish of Orleans and State of Louisiana.

Figure 1 is a plan view with the top of the frame removed. Fig. 2 is a sectional elevation in the line *x x*, Fig. 1. Fig. 3 is a sectional elevation in the line *y y*, Fig. 1.

Our invention relates to improvement in the class of stone-cutting machines wherein a gang of horizontal saws is reciprocated and used in connection with means for raising and lowering them. The invention consists in the combination with the feeding (or raising and lowering) mechanism of a peculiar arrangement of pawl, ratchet, forked arm, pitman, and slotted crank-arm, as hereinafter set forth, whereby, when the said forked arm is vibrated, a continuous rotary movement is imparted to the shafts which operate to feed the saws downward.

This arrangement allows of the rate or rapidity of feed to be easily regulated, is very simple or not liable to get out of order, and forms a highly desirable but inexpensive attachment to a certain class of stone-cutting machines.

From the above it will be understood that we do not claim raising and lowering gangs of saws by means of rotary shafts connected by bevel-gears, such as distinguished or belong to machines of the class we have referred to; but to convey a clear idea of the operation of our attachment we shall particularly describe the parts of such a machine.

Referring to the drawing, *a* are four uprights of any required dimensions, and made hollow, in the cavity of each of which is placed a vertical rack, *b*. The four uprights have slots *c* in their inner sides, through which pass the beams *d* that connect the racks *b*. The four racks *b* are in two pairs, those of each pair being connected by a beam, *d*. With the racks *b* engage pinions *e* placed on shafts *f*, that are mounted horizontally in boxes secured to the outside of the uprights *a*. On corresponding ends of the shafts *f* are placed bevel-gears *g*, which engage with bevel-gears *h* placed on the ends of a shaft, *i*, mounted in boxes secured to the front sides of two of the standards *a*. To the shaft *i* is pivoted a forked arm, *j*, between the branches of which a ratchet-wheel, *k*, is placed, the same being fixed upon the shaft *i*. A pawl, *l*, is pivoted between the branches of the arm *j*, said pawl engaging with the ratchet-wheel *k*. A pitman, *m*, connects the outer end of the arm *j* with a wrist-pin, *n*, placed in a slot made lengthwise of a crank, *o*, on a shaft, *p*, mounted in boxes secured to the front side of one of the standards *a*, above the shaft *i*. A band-wheel, *q*, is fixed on the shaft *p*, and on the opposite end of the latter from the crank *o*, is another crank, *r*, whose office is merely to test the machine.

The shaft *p* being revolved by a band passing around the wheel *q* imparts an intermittent motion to the shaft *i* through the instrumentality of the crank *o*, pitman *m*, arm *j*, pawl *l*, and ratchet *k*, which motion, through the instrumentality of the bevel-gears *g h*, pinions *e*, and racks *b*, gradually lowers equally the beams *d*, to the under sides of which are jointed the upper ends of hangers *s*, to whose lower ends are suspended the saw-frame *t*, which receives a vibratory motion through any sufficient means. The gradual lowering of the beams *d* feeds downward the saw-frame.

On the shaft *i* is fixed a band-wheel, 8, on each side of which are loose pulleys 9 10, one of which is turned by a crossed band and the other of which is turned in the opposite directions by a straight band. To raise the saw-frame the pawl *l* should first be lifted from the ratchet *k*, and then slip the belt from pulley 9 upon the band-wheel 8. When the frame is raised high enough slip the belt back upon the pulley 9 and drop the pawl *l* back upon the ratchet *k*. To lower the saw-frame take the same course with respect to the pawl *l*, but slip the belt from pulley 10 upon the band-wheel 8. When the frame is lowered sufficiently slip the belt back upon the pulley 10 and let fall the pawl.

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

The crank *o* fixed on shaft *p*, and provided with longitudinal slot, the pitman *m*, forked arm *j*, ratchet-wheel *k*, pawl *l*, and shaft *i*, all constructed and arranged as shown and described to operate in the manner and for the purpose specified.

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