(No Model.)

# H. DONNELLY.

## STONE DRESSING-MACHINE.

No. 332,999. Patented Dec. 22, 1885.

Fig. 1.

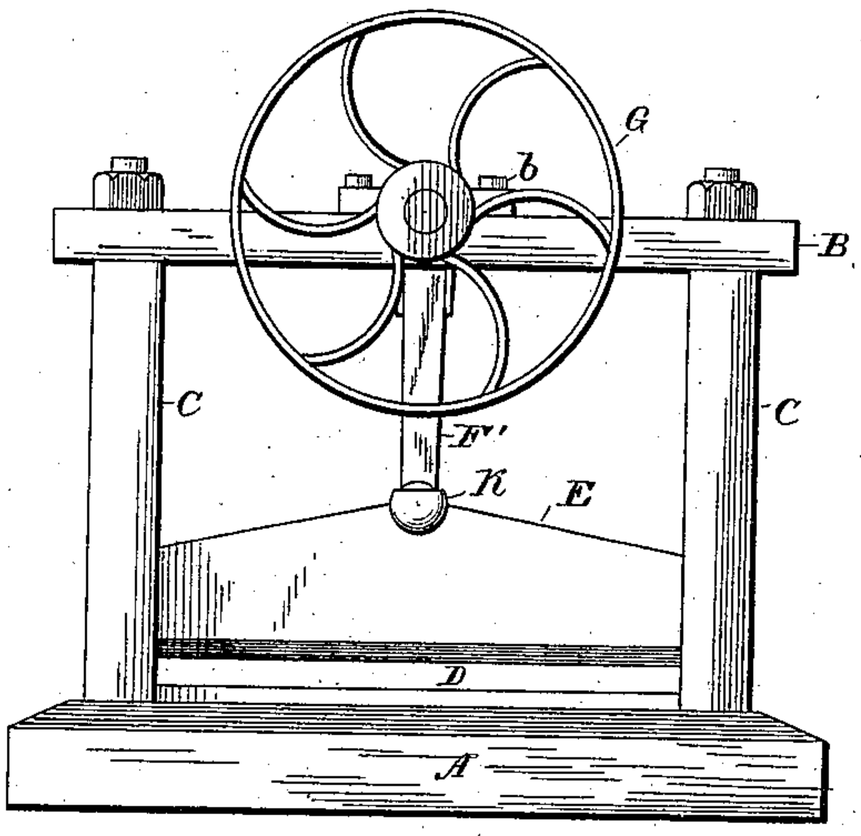



Fig. 2.

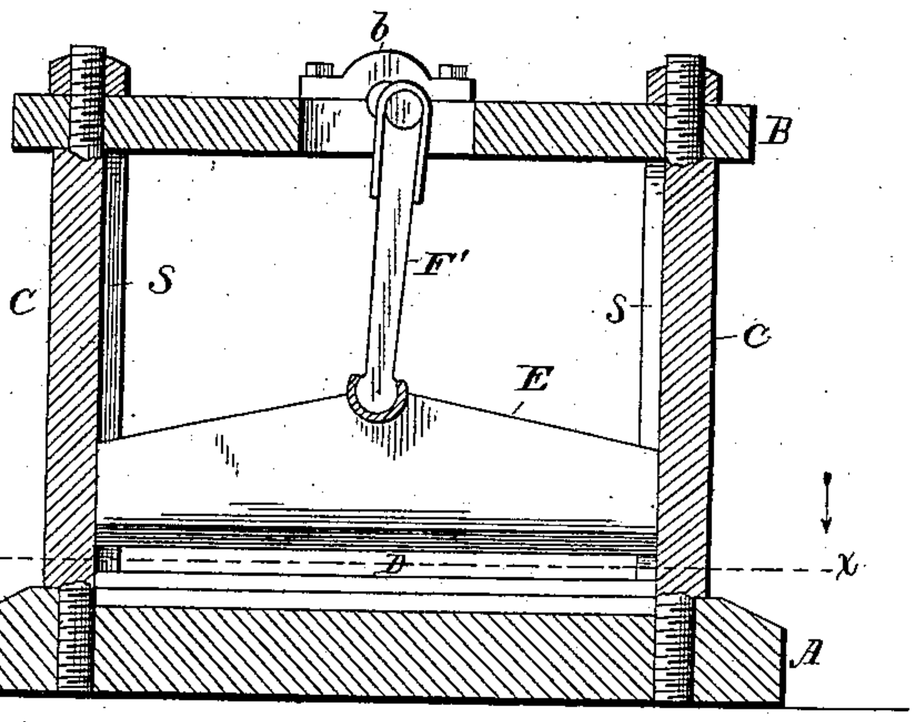



Fig. 3.

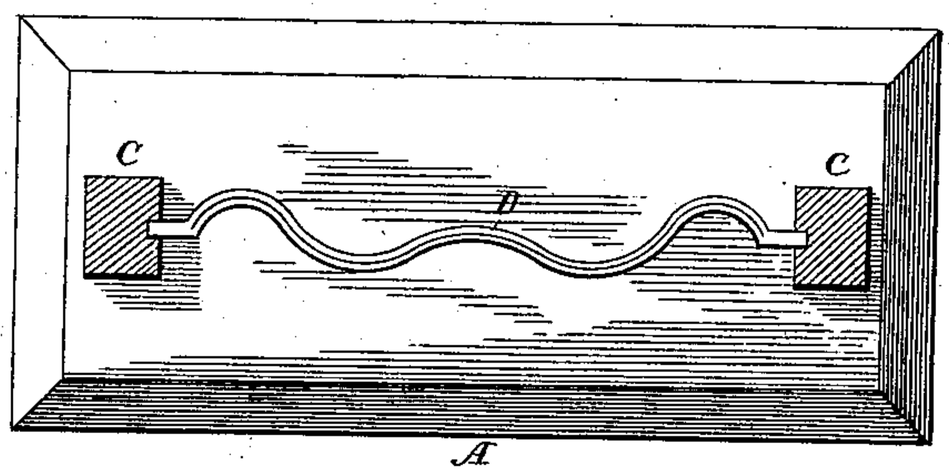
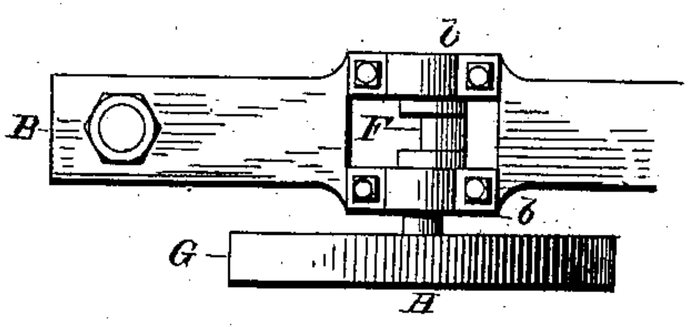



Fig. 4.




WITNESSES

F. L. Durand

W. Johnson

Henry Donnelly.

INVENTOR

Hoge & Burns

Attorney

# UNITED STATES PATENT OFFICE.

HENRY DONNELLY, OF SUTHERLAND FALLS, VERMONT.

## STONE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 332,999, dated December 22, 1885.

Application filed July 8, 1885. Serial No. 171,016. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY DONNELLY, a citizen of the United States of America, residing at Sutherland Falls, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in Stone-Cutting Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in machines for cutting stone; and it consists in the construction and combination of the parts whereby an even and steady power accompanied by a powerful pressure can be applied to the cutting-knives, between which are placed the slabs of stone which it is desired to cut, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side view of my improvement. Fig. 2 is a sectional view. Fig. 3 is a sectional view taken through the line *x x* of Fig. 2, and Fig. 4 is a detailed view.

A represents a solid bed-plate to which is rigidly attached a pair of vertical posts, C C, which are provided on their sides with vertical grooves *s s*. These upright posts C C are connected to each other by a transverse cap-piece, B, which is securely bolted to the upper ends of the posts, as shown. This cap-piece or cross-bar B is provided at its center with bearings *b b*, within which is journaled a shaft, H, which carries at its outer end the drive-wheel G. The shaft H, between the bearings *b b*, is provided with an eccentric or crank, F, to which is pivotally secured a bar, F′, the lower end of which is provided with a ball, K. A knife, E, is provided at its upper portion with a socket for the reception of the ball K, which is attached to the arm or bar F′, so as to connect the knife with the eccentric portion of the shaft. The knife E is reciprocated vertically, and is guided in its upward movement by the grooves *s s*. The knife E may be of any suitable configuration, and at its lower portion it is provided with a straight cutting-edge, which, as well as the body portion of the knife, may be curved laterally, as shown in Fig. 3, so that it may be employed to cut slabs having irregular-shaped edges. A knife, D, of a similar configuration is rigidly attached to the upper surface of the bed-plate A between the grooves *s s*.

I am aware that prior to my invention stone-cutting machines have been constructed with upper and lower knives, between which are placed the slabs for severing the same, the upper knife being connected to a piston-rod of a steam-engine; but in practice it has been found that such construction is objectionable, as the blow which is imparted to the stone through the upper knife is of such a nature that instead of forcing the stone apart on a line with the knife it shatters and irregularly breaks the edges, whereas with my improvement a slow and powerful pressure is applied to the knife, which will split the stone on a line with the edges of the knife. The stock or stone slabs which it is desired to sever are usually sawed to an even thickness and are held in position between the knives while they are being brought together. Sometimes the stock or slabs are uneven, one edge of the same being thicker or thinner than the other. When this is the case, the ball-joint attached to the upper knife will allow the knife to adjust its cutting-edge upon the surface of the stone so that it will contact with the same throughout its entire length, and thus allow the edges of the upper and lower knife to be in contact with the upper and lower surfaces of the slab from the commencement to the end of the stroke.

The device hereinbefore described is useful for cutting up thin stock or slabs of marble or scale for tile-floor, shelves, furniture-tops, mantels, &c., and the knives are of the configuration which it is desired to give to the edges of said slabs and by the device hereinbefore described can sever the slabs without waste and provide the corners with sharp angles.

If desirable other connections than the belt-wheel can be made for the shaft H.

I claim—

1. In a machine for cutting stone, the combination with a bed-plate having grooved

posts C, which are connected to each other by a rigid cap-piece having journals for the eccentric-shaft of a knife having all parts of its upper edge in the same horizontal plane and rigidly attached above the bed-plate, of a sliding knife with its lower edge parallel to that of the fixed knife and connected at its center by a ball-and socket joint to an arm which is operated by an eccentric, the parts being organized substantially as shown and specified.

2. The combination, with the bed A, carrying the fixed knife D, the standards C, having the grooves *s*, and the cap-piece B, having the bearings *b*, of the shaft H, having the eccentric or crank F and carrying the wheel G, the arm F′, having the ball K, and the knife E, having the socket and placed parallel to the fixed knife D, as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY DONNELLY.

Witnesses:
FRED R. PATCH,
WM. SMITH, Jr.