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BRICK CUTTER

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2 Claims. (Cl. 125—23)

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This invention relates to stone and brick cutting devices and more particularly to a machine for cutting brick and flagstone.

It is a principal object of this invention to provide a machine for cutting brick and flagstone and the like fired clay products which is simple in construction and rugged and long lasting.

Another object of the invention is to provide a machine for cutting brick and the like building material which is simple and economical to manufacture and which is fast and efficient in operation.

Another object of the invention is to provide a machine which is easy to transport around on the job and from one building to another and is readily demountable for sharpening the cutter blades.

The invention also consists in certain new and original features of construction and combination of parts hereinafter set forth and claimed. Other objects and advantages will be apparent as the invention is described in more detail.

Although the novel features which are believed to be characteristic of this invention will be pointed out more particularly in the claims appended hereto, the invention itself as to its objects and advantages, and manner in which it may be carried out, may be better understood by referring to the following description taken in connection with the accompanying drawings in which a specific embodiment thereof has been set forth for purposes of illustration.

Figure 1 is a perspective view of a machine embodying this invention;

Figure 2 is a sectional view taken through the machine illustrated in Figure 1 and along the plane indicated by the lines 2—2 of Figure 1;

Figure 3 is a horizontal section view taken on the lines 3—3 of Figure 2 and looking in the direction of the arrows.

Referring to the drawings in detail, wherein like reference characters indicate like parts throughout the several views, the numeral 10 indicates a metal base plate on which is mounted a pair of spaced L-shaped angle iron guide standards, generally indicated at 12, which are suitably welded at their bottom ends to the plate 10 so as to form a rugged unitary structure.

Each of the guide standards 12 comprises a continuous flat surface portion 14 which is bent backwardly upon itself at its upper end, as at 16, and extends back to the base plate 10, being arranged to form two parallel closely spaced surfaces defining a vertically disposed slot 18. Integral with the flat surface portion 14 is an out-

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wardly extending right-angle flange 20 which reinforces the flat portion 14, the flange being cut away at the bends, 16, as shown at 22 in Figures 1 and 2. Arranged for reciprocation in the slot 18 of the guiding standards 12 is a cutter blade 24, which is preferably of rectangular shape, the outer ends of which are guided in the slot 18 of the standards. Positioned below the cutter blade 24 is a second blade 26 which cooperates with the upper blade 24 and is of similar shape. The lower cutter blade 26 is supported along its lower edge by the base plate 10 and is removably fastened at its opposite ends in the slot 18, as by means of the cotter pins 30.

The cutter blades 24 and 26 are provided with opposed cutting edges 32 and 33 respectively, the edges of the blades being preferably ground to an angle of approximately 45°, and the blades are made of high carbon steel alloy and tempered to provide a long lasting blade. Where desired, the cutting blade portions 32 and 33 may be formed as an insert and suitably secured to the blade members 24 and 26.

Coil tension springs 36 are fastened at opposite ends of the blade 24 for urging the upper blade downwardly and in contact with the lower blade 26 and in position to hold a brick or flagstone piece therebetween at the desired angle for cutting the same. To provide for this, the blade 24 is of sufficient length to extend beyond the slot 18 in the standards 12 and is provided with an aperture 38 for fastening the upper end of the coil spring 36 thereinto. The lower end of the coil spring is suitably secured to the base 10, as at 40. Lateral movement of the blade 24 to any appreciable extent is prevented by the link members 42 of the spring which is inserted in the aperture 38 at opposite ends of the blade. Suitably attached, as by means of welding, to the top edge of the cutter blade 24 is a striking bar member 44. This bar is struck by hammer after placing a brick or stone between the cutter blades in order to sever the same at the desired location. The closed upper end portion 16 of the guiding standards 12 prevents the blade 24 from sliding out of the guiding groove 18 when the coil springs 36 become disconnected from the blade, and in addition strengthen and reinforce the standard and prevents the spreading of the same with the result that the guiding groove 18 would be distorted.

From the foregoing description, it will be seen, that a simple and sturdy cutter for brick, stone and the like is provided by the apparatus of the invention. The cutter blades also can be read-

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ily removed by merely disconnecting the coil springs from the ends of the blade 24 and removing the cotter pins 30 which pin the lower blade 26 to the guide standards. In this manner, the cutter blades can be readily removed and sharpened as required.

In use of the cutter, the top blade is lifted up against the coil springs and the brick or stone material to be cut is positioned on the knife blade edge 35 of the lower blade 26 and the upper blade 24 lowered onto the brick so as to receive the brick or stone at the desired angle for cutting along a straight edge. Thereafter, a hammer or sledge is struck against the bar 44 so as to bring about severing of the brick between the cutting blade edges.

Although the cutter of the invention is particularly useful in cutting brick and all types of clay products and natural stone and the like, the invention may also be utilized for cutting asphalt tile, slate and other types of brittle material and, if desired, may be used to cut metal such as wire, etc. The material can be readily cut at any desired angle along a straight edge and very quickly. Further, the cutter of the invention may be used to sever material which has a thickness up to six inches by the aid of a heavy hammer, such as a sledge hammer, where the same is needed, depending upon the density and hardness of the material to be cut.

While certain novel features of the invention have been pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes may be made in the construction of the cutter by those skilled in the art without departing from the spirit and scope of this invention.

Having described the invention, what is claimed as new is:

1. A portable machine for cutting bricks, flagstones and the like which comprises a base having a pair of standards mounted thereon, each of said standards defining a vertical guide slot, upper

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and lower co-acting blades retained at their opposite ends in said guide slots, and coil spring means attached to the outer ends of said upper blade and said base for urging said blade in cutting contact with said lower blade, each of said standards comprising a continuous flat portion bent back upon itself forming two spaced parallel upwardly extended members for defining a slot which is closed at its upper end.

2. A portable machine for cutting bricks, flagstones and the like, said machine comprising a base, a pair of vertical guides supported on said base, each of said guides comprising a pair of spaced back to back angle iron members joined together at their upper ends and fixed to the base at their lower ends, a lower blade resting on the base and having its ends positioned between the angle iron members of each guide, fastening means extending through the angle iron members and the ends of said lower blade and securing the lower blade to the guides, an upper blade having its ends slidably received between the angle iron members of each guide and against the opposing flanges of the angle iron members, said upper blade projecting outwardly from the guides, the outwardly projecting ends of said upper blade each having an aperture therein, and a pair of coil springs having lower ends secured to the base and upper ends terminating in hooks engaged in the apertures, said springs extending alongside of the guides and restricting horizontal movement of the upper blade in the guides.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
254,415	Wellington	Feb. 28, 1882
812,973	Barr et al.	Feb. 20, 1906
2,653,043	Patterson	Sept. 1, 1936
2,452,706	White	Nov. 2, 1948
2,490,989	Williams	Dec. 13, 1949