J. PARK.

CUTTING MACHINE.

APPLICATION FILED NOV. 27, 1915.

1,214,360.

Patented Jan. 30, 1917.

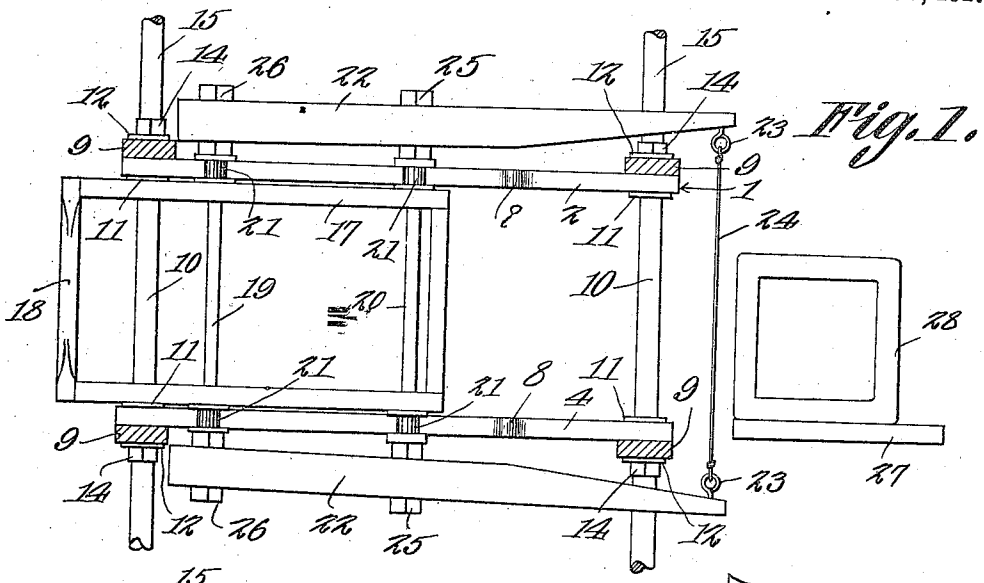


Fig. 1.

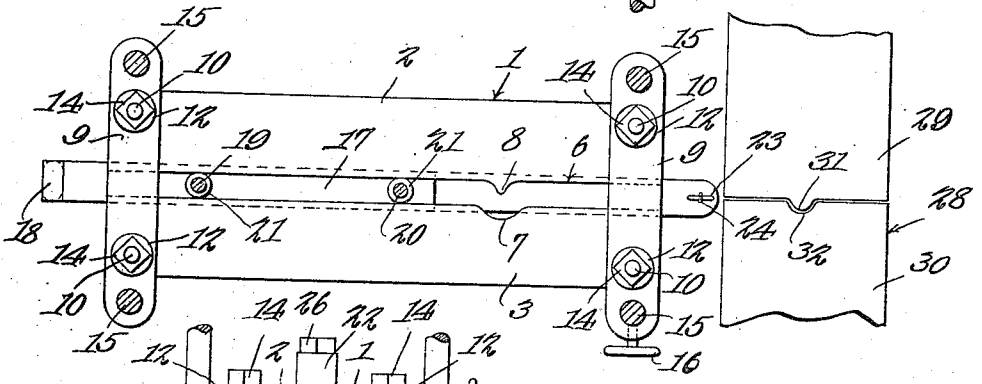


Fig. 2.

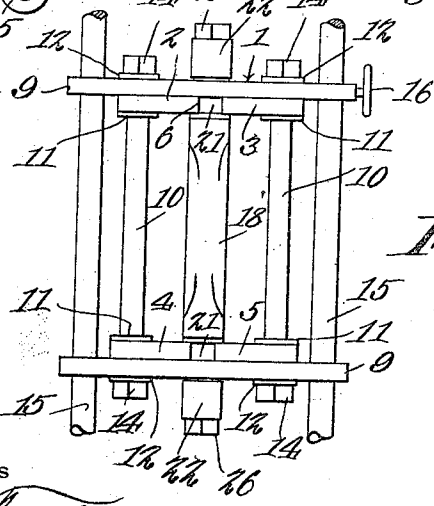


Fig. 3.

Witnesses

J. P. Lowe.

R. L. Parker.

James Park

Inventor,

by Cachow & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

JAMES PARK, OF HOPKINS, MINNESOTA.

CUTTING-MACHINE.

1,214,360. Specification of Letters Patent. Patented Jan. 30, 1917.

Application filed November 27, 1915. Serial No. 63,870.

To all whom it may concern:

Be it known that I, JAMES PARK, a citizen of the United States, residing at Hopkins, in the county of Hennepin and State of Minnesota, have invented a new and useful Cutting-Machine, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed for severing a plastic article such as a tile or building block to form parts, and to form in one of said parts a tongue adapted to be received in a groove in the other of the said parts.

One object of the invention is to provide novel means for imparting a lateral movement to a carriage which supports a cutting member, so that the cutting member at an appropriate point in the travel of the carriage, will be deflected to form simultaneously, a tongue and a groove as the tile or other article is severed.

Another object of the invention is to provide novel means for tightening the cutting member.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing: Figure 1 shows the invention in vertical longitudinal section, most parts of the structure appearing in elevation; Fig. 2 is a top plan wherein a portion of the carriage has been removed; Fig. 3 is a rear elevation.

In carrying out the present invention there is provided a main frame denoted generally by the numeral 1 and including primary plates 2 and 3 and secondary plates 4 and 5, the plates 4 and 5 being spaced from the plates 2 and 3. The plates 2 and 3 upon the one hand and 4 and 5 upon the other hand, are spaced to form slots 6. In the inner edges of the plates 3 and 5, offset recesses 7 are formed, the plates 2 and 4 being provided with projecting lugs 8 located opposite to the recesses, the slots 6 together with the offset recesses 7 and the lugs 8 constituting a guide for the carriage to be described hereinafter. The plates 2—3 and 4—5 are united at their extremities by end bars 9. Passing through the end bars 9 and the extremities of the plates 2—3—4—5 are posts 10 equipped with shoulders 11 engaging the inner faces of the plates 2—3—4—5 of the main frame 1. Washers 12 surround the posts 10 and bear against the outer faces of the plates above specified, nuts 14 being threaded onto the extremities of the posts, the construction being such that the main frame 1 is held rigidly together.

Through the ends of the bars 9 may pass guide rods 15, the construction being such that the main frame 1 may be moved longitudinally of the guide rods for adjustment. In order to hold the main frame in adjusted positions, one or more set screws 16 may be provided, the same preferably being threaded into the end of the bar 9 and being adapted to engage the guide rod 15.

Mounted to move longitudinally of the main frame 1 is a carriage embodying a rectangular frame 17 disposed between the plates 2—3 on the one hand and 4—5 on the other hand. The rear member 18 of the frame 17 constitutes a handle whereby the frame 17 may be moved to and fro with respect to the main frame 1. Rods 19 and 20 pass through the frame 17 and ride in the slots 6 of the main frame 1, there being anti-friction spools 21 journaled on the rods 19 and 20, the spools coacting with the inner edges of the plates 2—3—4—5 of the main frame 1. Disposed outwardly of the main frame 1 are arms 22 through which the ends of the rods 19 and 20 pass. Adjacent their forward ends, the arms 22 may be provided with screw eyes 23 or other elements adapted to a like end and extended between the screw eyes 23 is a flexible cutting member, preferably in the form of a length of wire shown at 24. Nuts 25 are threaded onto the ends of the rod 20 and lie upon opposite sides of the respective arms 22. Nuts 26 are threaded onto the ends of the rod 19 and coact with the opposite faces of the respective arms 22.

The numeral 27 designates a pallet or other support on which rests a hollow tile or the like, indicated at 28.

In practical operation, the carriage comprising the frame 17 and the arms 22 is

moved forwardly by means of the handle 18. The cutter or wire 24 enters one side of the tile 28 and cuts the same into two pieces 29 and 30. When the forward spools 21 encounter the recesses 7 and the lugs 8, the carriage is deflected laterally, and after the said spools pass beyond the lug and the recess the frame resumes its straightline course. The operation is such, as will be evident from Fig. 2, that when the carriage is deflected laterally as aforesaid, the tongue 31 will be formed in the element 29, a groove 32 being formed in the element 30.

By adjusting the nuts 26, the forward ends of the arms 22 may be spread apart, thus tightening up the cutter 24 so that in practical operation, the same is taut, the arms 22 prererably having a very slight movement upon the rod 20, so that the same may act as a fulcrum for the arms 22, when the nuts 26 are adjusted.

Having thus described the invention, what is claimed is:—

In a device of the class described, a main frame having a guide which is laterally deflected intermediate its ends; a carriage mounted to reciprocate on the main frame and embodying a secondary frame and rods mounted therein, the rods extending entirely across the secondary frame, the ends of the rods being mounted to slide in the guide; arms located exteriorly of the main frame and fulcrumed intermediate their ends on one rod, the arms projecting at their forward ends beyond the main frame; a cutter connecting the forward ends of the arms; and means on the other rod for engaging the rear ends of the arms to tilt the same on the first specified rod, thereby to effect the tightening of the cutter.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES PARK.

Witnesses:
GEORGE R. CULSHAW,
JOHN PETERSON.