CLAIMS

1. A wire saw excavation method with characteristics of cutting an edge line and grid-type cutting lines of cutting section inside the edge line into a removable size at one time by wiring of wire at each direction to multi directional pulleys mounted in horizontal, vertical and diagonal directions to entry arms which are inserted into several entry holes selectively perforated at intersections of the edge line and the grid-type cutting lines inside the edge line on a target surface, wiring each wire-saw on pulleys in a same direction inserted into adjacent entry holes, which performs the cutting of each cutting section while each rotates in different directions, and driving a driving roller where a part of the wire-saw is winded with a bearing capacity of a support frame having a matrix structure corresponding to the edge line and the cutting lines for supporting the entry arms in a direction towards the target surface while moving the driving roller in an opposite direction to insertion of the entry arms in order to divide and cut a full surface of a rock subject to excavation into a removable size at one time by using the wire-saw.

2. An excavating apparatus for dividing and cutting a whole surface at once by driving multidirectional entry arm pulleys; and a plurality of wire-saws wired on the multidirectional entry arm pulleys wherein each of the multidirectional entry arm pulleys comprises an entry arm and a plurality of pulleys, configured for

the multidirectional entry arm pulleys to be inserted into entry holes where cutting lines of the whole surface of an excavation target intersect and to be supported by a support frame having a matrix structure corresponding to an edge line and grid-type cutting lines of cutting section inside the edge line,

the plurality of pulleys to be mounted in at least one direction of horizontal, vertical and diagonal directions at an end of the entry arm,

the plurality of wire-saws to be wired on the multidirectional entry arm pulleys inserted into each entry hole in each direction in the same entry hole to match with the cutting lines,

each wire-saw to be wired on pulleys in a same direction inserted into adjacent entry holes and to be driven to cut the cutting lines in all directions at the same time,

and comprising a driving roller configured for a part of the wire-saw to be winded to be driven and to move in an opposite direction to insertion of the entry arm, and configured for

the whole surface to be cut at once along the edge line and the grid-type of cutting section inside the edge in each direction without reciprocal interference, even if the wire-saw in the horizontal, vertical and diagonal direction wired in the entry hole rotates in a narrow space by a function of rotating in different directions of the multidirectional entry arm pulleys inserted into the entry holes.