CLASS 125, STONE WORKING

SECTION I - CLASS DEFINITION

This class includes machines, tools, and processes not otherwise classified for operating upon stone or stone-like substance, which has previously been removed from its native position in the earth, and also some miners' hand-tools. This class does not include:

(1) Inventions classifiable in the class for Mining or In Situ Disintegration of Hard Material, for mining valuable material or disintegrating hard material in situ (See Search Notes below for specific class reference.);

(2) Inventions classifiable in the class for Abrading, for operating upon the surface of the material with an abradant; (See Search Notes below for specific class reference.);

(3) Processes and apparatus for comminuting stone and stone-like substance, classifiable in the class for Solid Material Comminution or Disintegration. (See Search Notes below for specific class reference.) Class 125 includes some patents for working stone or stone-like comminuting elements (e.g., millstones) to prepare them for use. See particularly subclasses 27+ and 42.

(4) Inventions which are equally useful for operation upon metal and are classifiable in classes for Metal Working; for Turning; for Cutting; for Cutting by Use of Rotating Axially Moving Tool; and for Gear Cutting, Milling, or Planing. (See Search Notes below for specific class references);

(5) Inventions which are equally useful for operation upon softer material, like wood and are classifiable in classes for Cutting; for Wood Turning; and for Woodworking (See Search Notes below for specific class references);

(6) A process or means for boring into the earth, concrete, stone or the like in situ is classified in the class for Boring or Penetrating the Earth, as is a hammer or impact device for impacting an earth penetrating means. (See Search Notes below for specific class reference.);

(6A) The class for Tool Driving or Impacting provides for subject matter directed to driving or impacting a tool, when such subject matter includes combined features peculiar to tool driving, but which does not include features limiting the subject matter to a specific tool art, such as specific shape of the work contacting portion of a tool, related tools, or an opposed work support. Class 125 has not been cleared as to subject matter in conflict with this line. (See Search Notes below for specific class reference.)

(7) Tools in which the invention resides merely in the means for securing the operating portion of the tool to the handle or holder. These are classified in the class for Chucks or Sockets. (See Search Notes below for specific class reference.)

(8) The subcombination of cleaning stone or brick by detergent, for which see the class for Cleaning and Liquid Contact With Solids. (See Search Notes below for specific class reference.)

(9) Ice picks and chippers, for which see the class for Cutlery Cutlery. (See Search Notes below for specific class reference.)

SECTION II - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

29, Metal Working, for inventions equally useful for operation upon metal (see (4) above).

30, Cutlery, for ice picks and chippers (also see (9) above).

82, Turning, for inventions equally useful for operation upon metal (see (4) above).

83, Cutting, for inventions equally useful for operation upon metal (see (4) above).

83, Cutting, for inventions equally useful for operation upon softer material, like wood (see (5) above).

134, Cleaning and Liquid Contact With Solids, for the subcombination of cleaning stone or brick by detergent (also see (8) above).

142, Wood Turning, equally useful for operation upon softer material, like wood (see (5) above).

144, Woodworking, equally useful for operation upon softer material, like wood (see (5) above).

173, Tool Driving or Impacting, for subject matter directed to driving or impacting a tool, when such subject matter includes combined features peculiar to tool driving, but which does not include features limiting the subject matter to a specific tool art, such as specific shape of the work contacting portion of a tool, related tools, or an opposed work support. (see (6A) above).

175, Boring or Penetrating the Earth, for a process or means for boring into the earth, concrete, stone or the like in situ; subclass 135 for a hammer or impact device for impacting an

earth penetrating means; and see the class definition of Class 175 for the line between Class 125 and Class 175 (also see (6) above).

241, Solid Material Comminution or Disintegration, for processes and apparatus for comminuting stone and stone-like substances. See the main class definition of that class (241) for the line. (also see (3) above).

279, Chucks or Sockets, for t.ools in which the invention resides merely in the means for securing the operating portion of the tool to the handle or holder. (see (7) above).

299, Mining or In Situ Disintegration of Hard Material, for mining valuable material or disintegrating hard material in situ. (See (1) above).

451, Abrading, for operating upon the surface of the material with an abradant (see (2) above).

408, Cutting by Use of Rotating Axially Moving Tool, for inventions equally useful for operation upon metal (see (4) above).

409, Gear Cutting, Milling, or Planing, for inventions equally useful for operation upon metal (see (4) above).

SUBCLASSES

1 MISCELLANEOUS:
This subclass is indented under the class definition. Inventions relating to the stone-working art are not otherwise classifiable.

2 DRESSING:
This subclass is indented under the class definition. Mechanically operating upon stone to cut, chip, or otherwise remove material from the surface thereof in such a manner as to produce a surface of definite form, the tool having a cutting movement independent of the relative feeding movement between the tool and the stone.

3 Rotary cutter:
This subclass is indented under subclass 2. The stone is operated upon by the rotation of a cutter other than a grinding-wheel.

SEE OR SEARCH CLASS:

408, Cutting by Use of Rotating Axially Moving Tool, appropriate subclasses, for drilling machines which feed the work or tool or both relative to one another along the axis of the tool; and, see the Notes thereto for other machines in which a rotating tool is fed relative to work.

4 Cutter-support feed:
This subclass is indented under subclass 3. Machines in which the cutter-support is given a feeding movement during operation of the cutting-tool.

5 Rotary tools:
This subclass is indented under subclass 3. Rotary power-operated tools adapted to be interchangeably secured to power-driven arbors of stone-dressing machines.

6 Pick-action cutter:
This subclass is indented under subclass 2. The stone is operated upon by the continuous operation of a picking-tool.

7 Cutter-support feed:
This subclass is indented under subclass 6. Machine in which the picking-tool support is given a feeding movement during operation of the picking-tool.

8 Arm-supported tool:
This subclass is indented under subclass 2. Machines in which a tool capable of independent operation is supported on the end of an arm which extends considerably beyond the main frame of the machine.

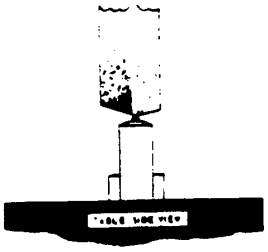
9 PLANING:
This subclass is indented under the class definition. Material is removed from a stone-surface by movement of a tool with a cutting edge along the surface of the stone.

10 TURNING:
This subclass is indented under the class definition. The stone is given a continuous rotary movement against a tool.

11.01 Grinding-wheel dressing:
This subclass is indented under subclass 10. Subject matter in which the wheel is sharpened by cutting away its glazed or loaded grinding surface, thereby exposing sharp new cutting grains to the work.

(1) Note. For ease of cutting and proper chip removal, voids are provided in the

grinding wheel. As cutting proceeds, some chips become firmly lodged in the voids. This reduces grain clearance and cutting efficiency. This condition is called "loading".



SEE OR SEARCH CLASS:

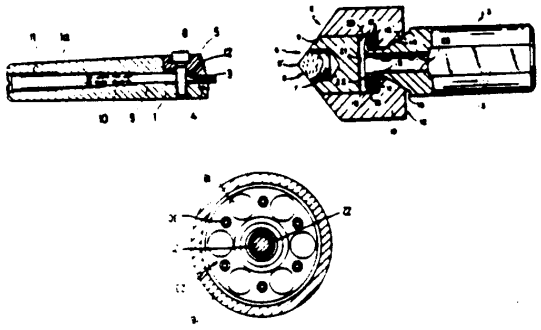
451, Abrading, subclass 442 for an accessory having a function supplemental to grinding such as "truing," subclass 72 for a combined abrading machine with dressing, subclasses 21 and 22 for a grinding machine with grinding wheel wear compensation, and subclass 56 for a method of grinding and tool forming.

11.02 Indexing of tool point:

This subclass is indented under subclass 11.01. Subject matter in which a dressing tool for truing up the grinding wheel has a plurality of cutting edges and is secured to a tool holder for a movement which causes a change from one cutting edge to another.

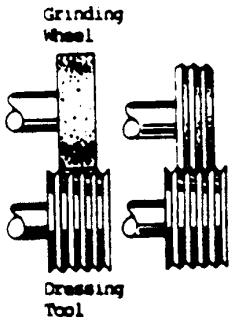
(1) Note. The dressing tool may include a truing head consisting of a cylinder provided with a series of separate retractable diamond tools each of which is capable of being rigidly locked.

(2) Note. The dressing tool may include a body having a shank, an insert holder and an indexable head diamond insert press fitted into the insert holder.



11.03 Rotary or crush dressing:

This subclass is indented under subclass 11.01. Subject matter for dressing the grinding wheel surface by use of a (heavy crushing) pressure between the tool and the grinding wheel to break the grinding wheel abrasive bond or by the use of a dressing tool which rotates during dressing.



11.04 Contouring of grinding wheel face:

This subclass is indented under subclass 11.01. Subject matter to produce a form other than flat on the wheel surface.

(1) Note. This form may be a curve or radius, an angle, indentation or serration (tooth), or any type of profile other than straight.

11.05 Cam controlled:

This subclass is indented under subclass 11.04. Subject matter for forming a shape on the grinding wheel with a relative movement between the grinding wheel and dressing tool, the path of which is guided or controlled by a rotatable, pivotal or rockable member having a contour.

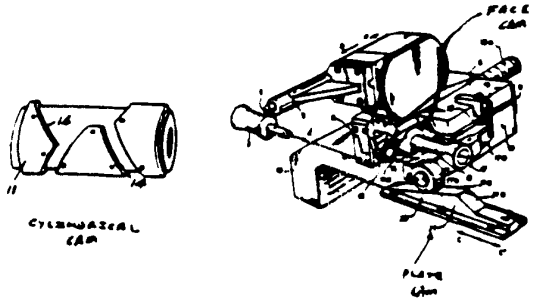
(1) Note. Three generic types of cam are: face, cylindrical, and plate.

(1)The face cam consists of a cam track cut into the periphery of a wheel.

(2)The cylindrical cam has the cam track cut into the face of a cylinder.

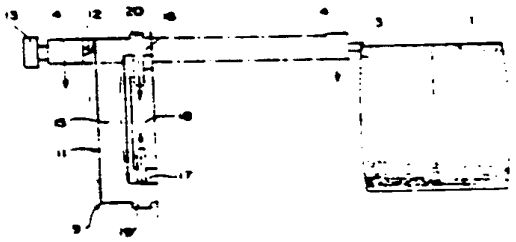
(3)The plate cam use the periphery of edge of a longitudinal member. The cam follower presses against the edge of a plate cam and is held there by pressure from a spring or the pressure of the grinding wheel itself.

(2) Note. In cam controlled, the dressing tool is mounted in a floating holder that is actuated by a cam to produce required shape in the wheel.

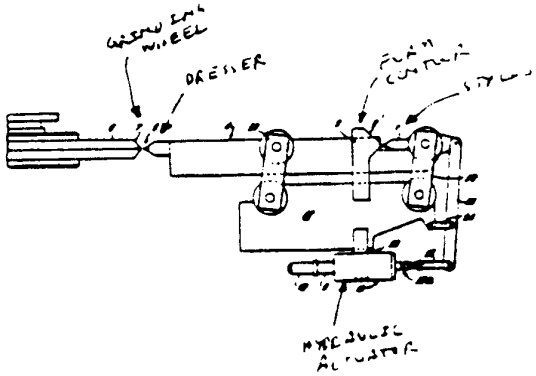


11.06 Templet-or pattern-controlled:
This subclass is indented under subclass 11.04. Subject matter which includes an original or model form contour for imitation and a stylus. The point of the stylus following the form contour activates the dressing tool to duplicate the form contour on the periphery of the grinding wheel.

(1) Note. The device duplicates the motion path of a tracer moving over a templet, but does so with a reduction in motion in proportion to the pantograph ratio. The templet is the exact form that is required on the grinding wheel but is enlarged by an amount equal to the pantograph ratio.

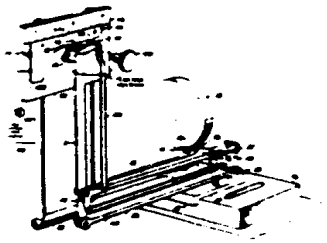


11.07 Hydraulically actuated:
This subclass is indented under subclass 11.06. Subject matter in which the dressing motion is imparted by fluid acting on a piston.



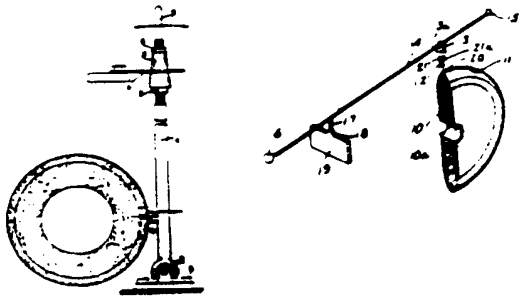
SEE OR SEARCH THIS CLASS, SUBCLASS:
11.2, for dressing tool motion controlled by fluid actuated drive means.

11.08 Pantograph:
This subclass is indented under subclass 11.06. Subject matter in which the dressing tool is operated by a device, having a stylus for tracing and copying, mounted on multiple jointed members in the form of a parallelogram.



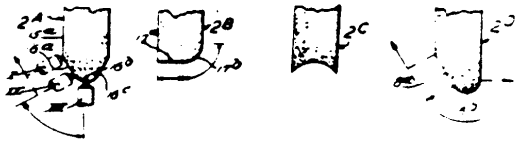
11.09 Fulcrum bar:
This subclass is indented under subclass 11.06. Subject matter which includes a single lever or arm having one end journaled for universal movement and the other end operating over a form template.

(1) Note. The arm or lever has a single support which may be a spherical bearing, a gimble mechanism, a ball or roller type bearing or other similar means which permits the lever movement.



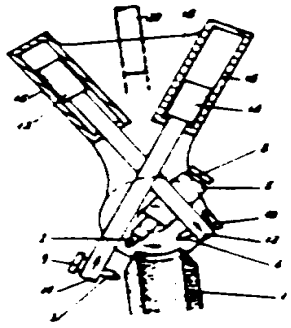
11.1 Tangent bar forms arcuate surface:
This subclass is indented under subclass 11.04. Subject matter in which the dressing tool is guided by an elongate bar which is transversely rotated around a curved surface.

11.11 Forming arcs and tangents thereto:
This subclass is indented under subclass 11.04. Subject matter in which the wheel dresser produces a surface of curved form on the grinding wheel and also a planer surface which intersects the curved form.

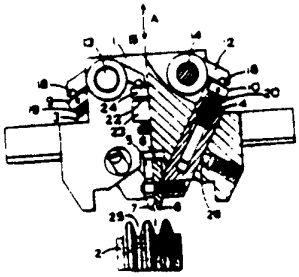


11.12 Generation of arc or bevel by two or more tools:
This subclass is indented under subclass 11.04. Subject matter in which a curved or bevel surface on a grinding wheel is accomplished by two or more dressing tools.

(1) Note. Both tools may produce bevel surface on each side of a wheel or one tool may produce a bevel surface and the other tool may produce a curved surface.



11.13 With compound motion of tool:
This subclass is indented under subclass 11.04. With compound motion of tool:ubject matter in which the dressing tool is moved in a main dressing motion and also has an additional or separate motion which motion together produces the desired shape.

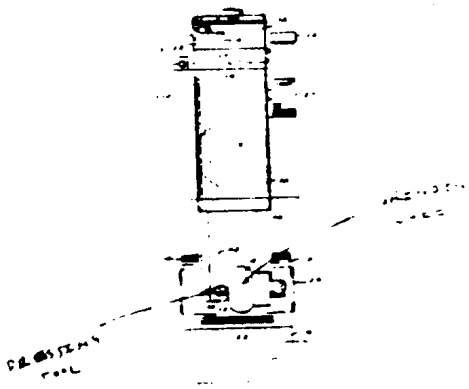


11.14 Arc forming by swinging tool:
This subclass is indented under subclass 11.04. Subject matter in which a swinging arm that carries the dressing tool pivots in an arc or radius about an axis to form a curved shape on the grinding wheel.

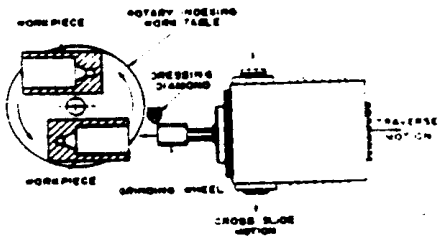
11.15 Forming bevel:
This subclass is indented under subclass 11.04. Subject matter in which the dressing tool cuts an inclination that forms an angle other than a right angle with respect to the grinding wheel axis of rotation.

11.16 By swinging tool:
This subclass is indented under subclass 11.15. Subject matter in which the dressing tool swings about an axis to form an angle on the grinding wheel face.

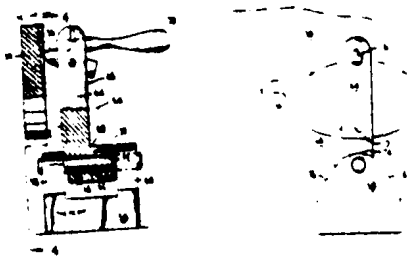
11.17 Transverse swinging motion to form planar surface:
This subclass is indented under subclass 11.01. Subject matter which forms a linear grinding surface across the grinding wheel by a dressing tool pivoting in a plane generally parallel to grinding wheel surface.



11.18 Peripheral grinding face:
This subclass is indented under subclass 11.01. Subject matter in which the tool is especially adapted for dressing of a grinding wheel which is used in grinding the internal bore of a work-piece.



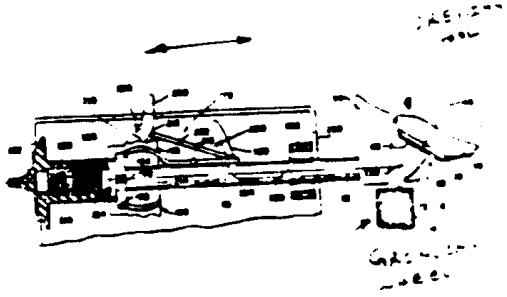
11.19 Radial grinding face:
This subclass is indented under subclass 11.01. Subject matter which provides for movement of dressing tool across the side face of the grinding wheel, i.e., the dresser acts along the radial face of the grinding.



11.2 Hydraulic tool traversing means:
This subclass is indented under subclass 11.01. Subject matter in which the dressing tool is moved across the grinding wheel by fluid actuated drive means.

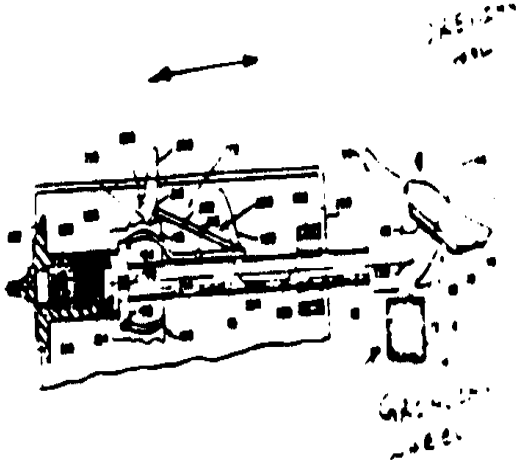
11.21 Rectilinearly reciprocating tool:
This subclass is indented under subclass 11.01. Subject matter in which the dressing tool traverses back-and-forth in a straight line across the face of the grinding wheel.

(1) Note. The dressing tool may dress the wheel during forward movement or during backward movement.



11.22 Coolant supply:
This subclass is indented under subclass 11.01. Subject matter in which a coolant fluid or similar means is provided to cool the dressing tip.

(1) Note. The life of the dressing tip is extended by preventing it from becoming overheated during the wheel dressing and truing operation.



11.23 With compensator for tool wear:
This subclass is indented under subclass 11.01. Subject matter including a supplementary mechanism responsive to the operation of means for dressing the wheel and effective to adjust the distance between the wheel and the dressing tool by a predetermined fixed amount to offset the reduction in the dressing tool which results from the dressing operation.

12 SAWING:
This subclass is indented under the class definition. The stone is divided into two or more smaller stones by sawing a kerf either entirely through the stone or to a sufficient depth to permit the portions to be readily broken apart.

SEE OR SEARCH CLASS:

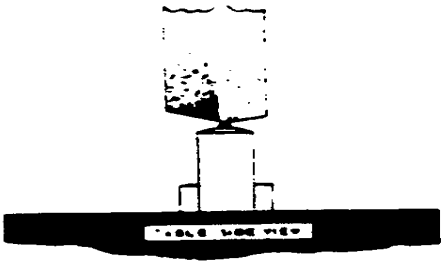
30, Cutlery, subclass 166, is the generic place for hand manipulable saws and see (3) Note thereto for other classes where hand manipulated saws and sawing machines will be found.

83, Cutting, subclasses 875+ and 915.3 for ice-cutting machines.

175, Boring or Penetrating the Earth, subclass 91 for earth boring means including a continuously rotating bit describing a noncircular cross-sectional bore.

13.01 Rotary:
This subclass is indented under subclass 12. Subject matter in which sawing of stone or similar material is accomplished by rotation of a circular saw in the plane of the kerf.

(1) Note. The device usually comprises a blade which is held between a pair of plates or supported by a frame assembly or similar support means and operatively connected to a drive means to rotate at a very high speed.

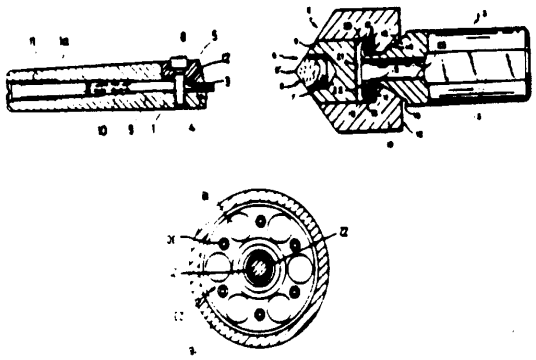


SEE OR SEARCH CLASS:
30, Cutlery, subclass 347 for rotary blades.
83, Cutting, subclasses 409+ for cutting by using rotatable-disc tool pair or tool and carrier.
175, Boring or Penetrating the Earth, subclass 91 for rotating cutters forming circular bores.
408, Cutting by Use of Rotating Axially Moving Tool, appropriate subclasses for drilling machines which feed the work or tool or both relative to one another along the axis of the tool; and, see the notes thereto for other machines in which a rotating tool is fed relative to work.

13.02 Having internal cutting edge:
This subclass is indented under subclass 13.01. Subject matter including a rotary blade having an opening with a cutting edge on the internal edge of the opening, the workpiece being projected into the opening for cutting.

SEE OR SEARCH CLASS:
451, Abrading, subclass 180 for an abrading machine in which grinding is done by the internal peripheral face of an annular tool having rotary motion.

13.03 With pivoted frame:
This subclass is indented under subclass 13.01. Subject matter in which the saw blade is mounted for movement on a swingable arm adjacent to the workpiece.

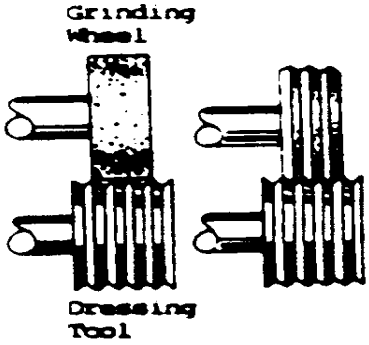


SEE OR SEARCH CLASS:
83, Cutting, subclass 490 for cutting by saws mounted on a rotatable carrier movable during cutting.
451, Abrading, subclass 236 for abrading machines in which the tool is mounted on a swinging carrier, permitting its application to and removal from the work, as desired.

14 Saw-support feed:
This subclass is indented under subclass 13.01. Machines in which the saw-support is given a feeding movement during the operation of the saw.

15 Saw blades:
This subclass is indented under subclass 13.01. Rotary disk saws adapted to be interchangeably secured to power-driven arbors of stone-sawing machines.

16.01 Reciprocating:
This subclass is indented under subclass 12. Subject matter wherein the cutting blade moves back and forth in a straight line.

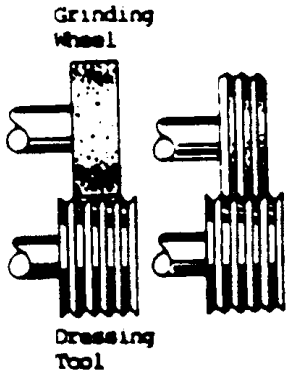


SEE OR SEARCH CLASS:

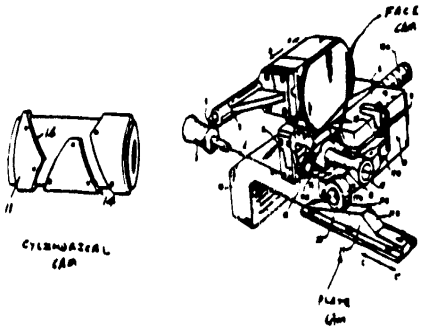
83, Cutting, subclass 746 for cutting by tool reciprocable along elongated edge and by rectilinearly reciprocating tool.

451, Abrading, subclass 164 for abrading machine having rectilinearly reciprocating tool.

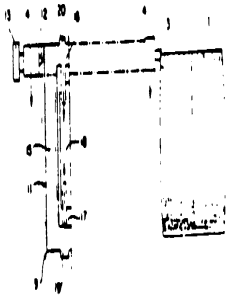
16.02 Having saw with supply and take-up means:
This subclass is indented under subclass 16.01. Subject matter having means to feed a fresh portion of the saw for cutting to the workpiece and to move the used portion of the saw away from the workpiece.



16.03 Lever-operated saw:
This subclass is indented under subclass 16.01. Subject matter in which the saw blade is supported by pivoting members for its cutting movement.



16.04 Angular cutting saws:
This subclass is indented under subclass 16.01. Subject matter in which a plurality of saws are arranged to cut the workpiece in blocks or slabs of tapering form.



17 Saw racks:
This subclass is indented under subclass 16.01. Frames in which the saws are mounted and which reciprocate with the saws during operation.

18 Saw blades:
This subclass is indented under subclass 16.01. Reciprocating saw-blades adapted to be interchangeably secured to the other parts of the machine for receiving a reciprocating movement.

19 Oscillating:
This subclass is indented under subclass 12. Sawing stone by the oscillation of a saw-blade in the plane of the kerf.

20 Disk cutting:
This subclass is indented under subclass 12. Cutting of a cylindrical kerf by rotary movement of a saw in a closed path around the periphery of the disk.

SEE OR SEARCH CLASS:
175, Boring or Penetrating the Earth, subclasses 403+ for a core forming type earth boring bit.

21 Endless:
This subclass is indented under subclass 12. Sawing stone by the continuous travel of an endless flexible member along its own length while in contact with the stone.

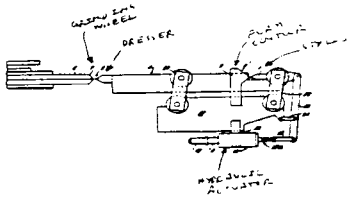
22 Saw teeth:
This subclass is indented under subclass 12. Abrading or cutting units adapted to be independently secured to or formed along the edge of a saw-blade at spaced-apart points.

23.01 SPLITTING, SHEARING AND PUNCHING:
This subclass is indented under the class definition. Subject matter for shearing, splitting, or punching of stone by the application of opposing forces to different portions of an integral stone.

SEE OR SEARCH CLASS:
225, Severing by Tearing or Breaking, subclasses 93+ for breaking or tearing apparatus.
241, Solid Material Comminution or Disintegration, subclass 4 which includes physical steps of separation of the laminations of materials (such as mica) when combined with the comminuting or disintegrating step.

23.02 Roller-type cutters:
This subclass is indented under subclass 23.01. Subject matter in which a working force is applied by at least one member having a cutter in the form of a rotatable element which is traversed across the workpiece.

(1) Note. Cutting to a desired size or shape is usually accomplished by scoring the surface of the workpiece.



24 Mica splitting:
This subclass is indented under subclass 23.01. Separating mica or mica-like substance along its planes of cleavage.

25 SLATE SURFACING:
This subclass is indented under the class definition. Dressing the surfaces of slates or thin slabs of stone.

26 BRICK CLEANING:
This subclass is indented under the class definition. Removing foreign material adhering to bricks.

SEE OR SEARCH CLASS:
134, Cleaning and Liquid Contact With Solids, for processes of cleaning brick by detergent action.

27 MILLSTONE DRESSING:
This subclass is indented under the class definition. Cutting or cleaning the grooves or millstones or like objects.

SEE OR SEARCH CLASS:
241, Solid Material Comminution or Disintegration, subclasses 291+ for comminuting elements (e.g., millstones). Patents including claims to both the comminuting element and the process or apparatus for dressing or fashioning it are classified in class 241 on the basis of the article.

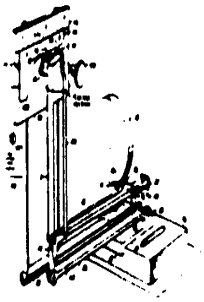
28 Rotary cutter:
This subclass is indented under subclass 27. Operating upon the grooves of millstones by the continuous rotation of a cutter other than a grinding-wheel.

29 Pick-action cutter:
This subclass is indented under subclass 27. Operating upon the grooves of millstones by the continuous operation of a picking-tool.

30.01 PRECIOUS STONE WORKING:
This subclass is indented under the class definition. Subject matter for working various minerals, such as diamond, emerald, ruby, or sapphire, valued for their rarity or appearance.

SEE OR SEARCH CLASS:
29, Metal Working, subclass 25.35 for piezoelectric device making.
175, Boring or Penetrating the Earth, subclass 434 for an earth boring bit which includes a diamond on its cutting edge.
356, Optics: Measuring and Testing, subclass 30 which includes claims for nominal cutting of crystal to prepare it for optical examination.

30.02 Wire drawing die making:
This subclass is indented under subclass 30.01. Subject matter for forming or reconditioning the hole in a wire drawing die.



35 WORK SUPPORTS:
This subclass is indented under the class definition. Supporting structures for holding stones in place while being operated upon.

SEE OR SEARCH CLASS:
269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an article (or articles) in position to be operated on or treated. See notes thereunder for other related loci.

36 TOOLS:
This subclass is indented under the class definition. Tools for operating upon stone not otherwise classifiable.

SEE OR SEARCH CLASS:
30, Cutlery, subclasses 164.5+ for ice picks and chippers.
175, Boring or Penetrating the Earth, subclasses 327+ for an earth boring bit or bit element.
299, Mining or In Situ Disintegration of Hard Material, subclasses 79.1+ for a cutter head or tooth for mining or disintegrating hard material in situ.

37 Traction rotated:
This subclass is indented under subclass 36. A freely rotatable wheel adapted to wear down the surface of the stone by traveling across the same.

38 Surface traversing:
This subclass is indented under subclass 36. The cutting portions are rigidly held in place and are adaped to be moved along the stone-surface to remove material therefrom.

39 Diamond:
This subclass is indented under subclass 38. The cutting portion consists of a diamond rigidly held in place.

SEE OR SEARCH CLASS:
175, Boring or Penetrating the Earth, subclass 434 for an earth boring bit which includes a diamond on its cutting edge.

40 Impact:
This subclass is indented under subclass 36. For dressing stone by striking against the stone-surface.

SEE OR SEARCH CLASS:
81, Tools, subclass 463, and see the notes thereto for other impact tools.
175, Boring or Penetrating the Earth, subclasses 414+ for an impact type earth boring bit.

41 Bush hammers and chisels:
This subclass is indented under subclass 40. Provided with a plurality of closely-arranged projections upon the stone-striking portion.

42 Millstone picks:
This subclass is indented under subclass 40. For cleaning and cutting the grooves of millstones. The cutting element usually consists of a blade with its cutting edge extending laterally and transversely of the handle.

(1) Note. See the note under subclass 27.

43 Miners' picks:
This subclass is indented under subclass 40. Adapted to be used upon comparatively soft material or ordinary earth.

CROSS-REFERENCE ART COLLECTIONS

901 FORMING PIEZOELECTRIC CRYSTALS:
This subclass is indented under the class definition. Apparatus having means to form an element which has ability to generate voltage when mechanical force is applied or to produce mechanical force when a voltage is applied.

END