United States Patent

[11] 3,587,193

[72] Inventor E. R. Lewis
Dayton, Wash.

[21] Appl. No. 781,041
[22] Filed Dec. 4, 1968
[45] Patented June 28, 1971

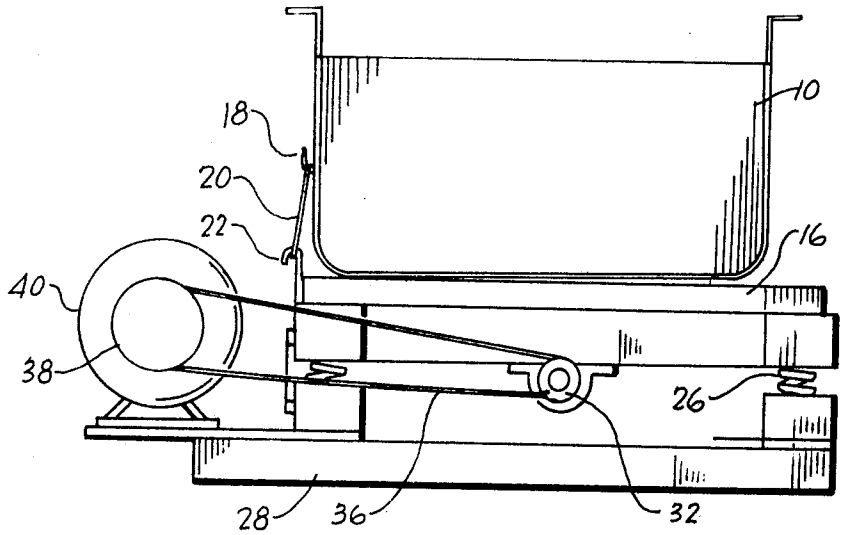
[54] ROCK POLISHER
4 Claims, 7 Drawing Figs.

[52] U.S. Cl. 51/163, 259/72
[51] Int. Cl. B24b 31/06
[50] Field of Search 51/163, 7; 259/72

[56] References Cited
UNITED STATES PATENTS
3,353,796 11/1967 Roberts 51/163X

Primary Examiner—Travis S. McGehee
Attorney—Wells & St. John

ABSTRACT: Apparatus for polishing rocks which I call a Rock Artifact Dinghummer Polisher. A pot contains rocks to be polished as well as polishing material is supported on a table and means are provided by shaking the table automatically with short and extremely rapid vibrations to establish a churning action of material and rocks whereby polishing ensues.



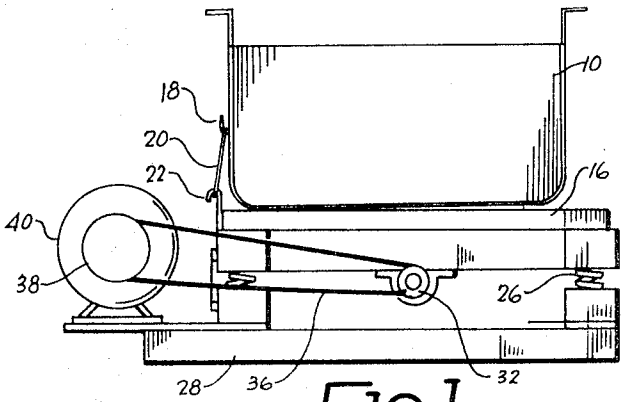


FIG. 1.

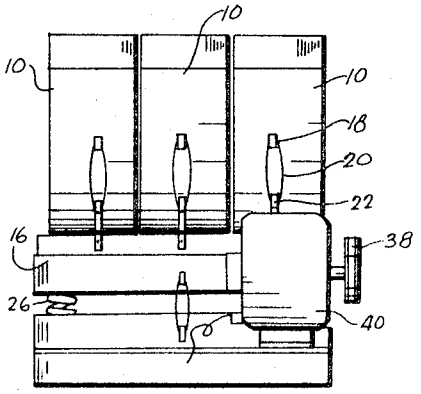


FIG. 2.

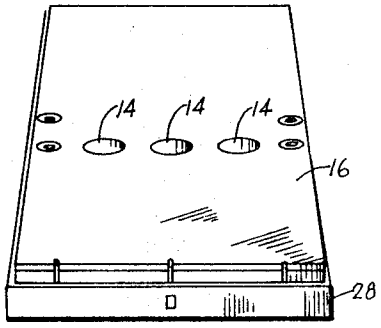


FIG. 3.

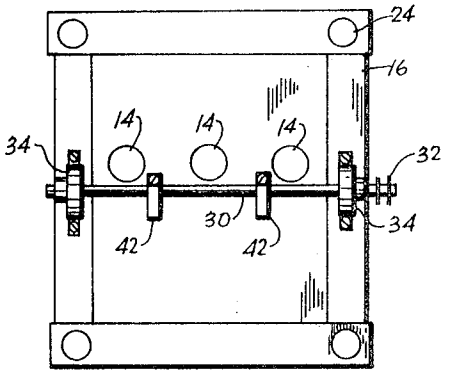


FIG. 5.

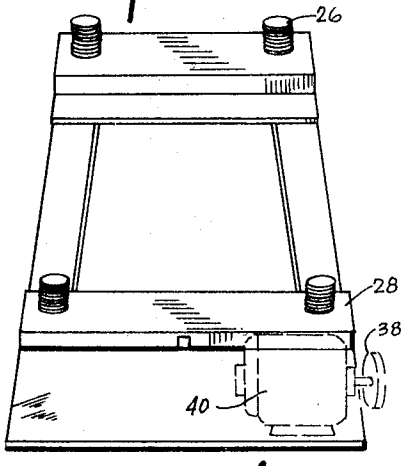


FIG. 4.

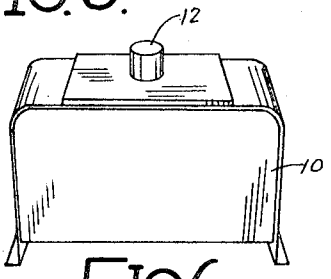


FIG. 6.

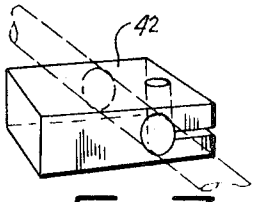


FIG. 7.

INVENTOR.
E.R. LEWIS

ROCK POLISHER

SUMMARY OF THE INVENTION

The Dinghummer Polisher polishes all rock shapes such as small rocks, flats, odd shapes, squares and facets, leaving all edges unchanged. My polisher will not damage rock, rock shape or wear rock round.

This polisher can carry from 75 to 150 pounds of rock at one time. Rock size may vary from small pebbles to sawed rocks up to 3 inches in diameter as well as one-half of a thunder egg. Large petrified wood chunks and agates may also be polished to perfection with my machine.

Rocks which are being polished climb the rock pot wall in a counterclockwise motion while the motor runs in a clockwise motion. The platform upon which the rock pots rest is lifted and carried by air pressure which results from air movement under the platform. This movement is allowed by the employment of very slack belts. Rock movement speed is controlled by slackness or tightness of rubber bands previously described.

Heretofore there has not been designed a rock polisher which will polish without damage to small rock shards and pieces produced as a byproduct when the early inhabitants of America made their stone tools and weapons. My invention carries out a nondamaging polishing action by shaking the table with short and extremely rapid vibrations thereby setting up a churning action of the rock artifacts and polishing materials in the pot which is placed and secured on the table.

The table is mounted at the base by a spring at each corner with the weight of the table holding the table to the base. The one-sixth horsepower electric motor and pulley turns the shaft. The pulley on the motor is 1½ times the size of the pulley on the shaft. Two offcenter weights are bolted or welded to the shaft which weights are off center in the same identical direction. These offcenter weights produce the desired vibration. The shaft is fixed to the underside of the table and turns in two bearings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a side view of my apparatus;

FIG. 2 is an end view thereof;

FIG. 3 is a top view of the table with the pots removed;

FIG. 4 is a top view of the structure with the top of the table as well as the pots removed;

FIG. 5 is a bottom view of my apparatus;

FIG. 6 is an inverted view of a pot; and

FIG. 7 is a view of the weights.

BRIEF DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to FIGS. 1—7, three narrow elongated hollow pots **10** open at the top each have a vertical prong **12** at the center of the bottom which fits into a corresponding hole **14** in a horizontal wood table top **16**. Each of these pots has at one end a horizontal pin or hook **18** secured by a rubber band **20** to a corresponding hook **22** extending upward from top **16**.

The bottom corners of top **16** have recesses **24** into which the top ends of vertical coil springs **26** extend. These springs are supported at their bottom ends by horizontal frame **28**.

A horizontal shaft **30** rotatable about its own axis by pulley **32** thereon is journaled in bearings **34** and extend along holes **14** at the bottom of top **16**. Pulley **32** is connected by a slack belt **36** to a pulley **38** on electric motor **40**.

Weights **42** are secured to the shaft. When the motor drives the shaft, these weights, being off center, produce the desired vibrations and also act as fan blades, producing an air motion which tends to raise the table top.

The rocks and polishing material in the pots are churned and thus rocks are polished as described.

While I have described my invention with particular reference to the drawings, such is not to be considered as limiting its actual scope.

I claim:

1. Apparatus for polishing rocks, comprising:
at least one open pot into which rocks and polishing material can be loaded;
a horizontal platform for said pot;
shaking means operatively connected to said platform for shaking said platform with short and extremely rapid vibrations to establish a churning action for polishing;
said pot having at its bottom a vertically downward extending prong and said platform having a complimentary hole in which said prong is received;
and resilient tension means connected between one end of said pot and the corresponding end of said platform.

2. Apparatus as set forth in claim 1 wherein said pot has a horizontal hook at said one end thereof, said platform having another hook extending upward therefrom, said resilient tension means comprising a rubber band interconnecting said hooks.

3. Apparatus as set forth in claim 2 wherein said shaking means includes a horizontal shaft located by a motorized drive and secured to said platform.

4. Apparatus as set forth in claim 3 further including offset weights secured to said shaft and rotated thereby.