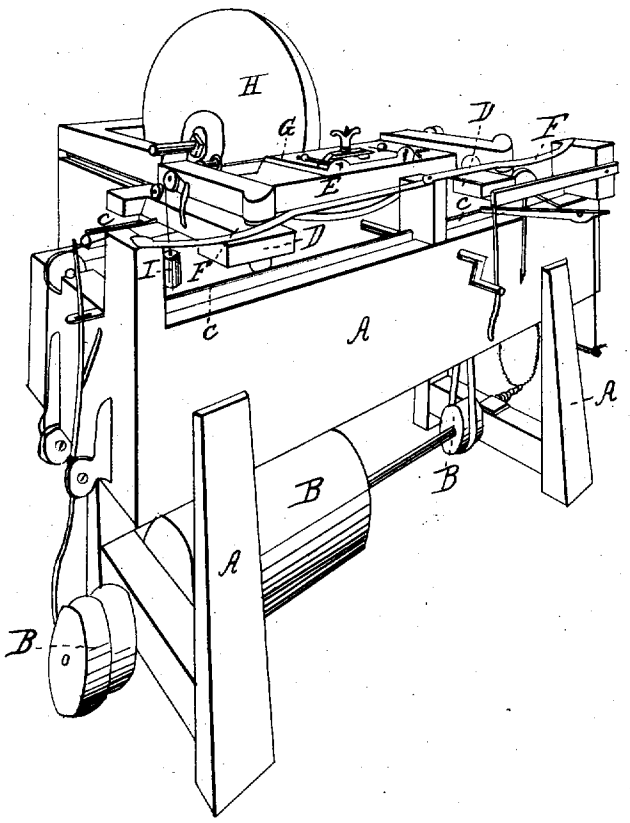
8224X

J. Wheaton,

Grinding Metal Surfaces.

Patented May 28, 1834.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

5/28/1834 8224X

May 28: 1834 495

James Wheaton Providence Rhode Island

Sellers Patent

The Schedule referred to in these Sellers Patent and making part of the same containing a description in the words of the said James Wheaton himself of his Improvement called the Elliptic Spindle Grinder

Specification and Description of the Elliptic Spindle Grinder being an Improvement on the Spindle Grinder in common use, and which may be used for grinding various kinds of Spindles.

Be it known and remembered that I James Wheaton Machinist at Providence in the County of Providence and State of Rhode Island have invented a new and useful Improvement on the Spindle Grinder called by me, the Elliptic Spindle Grinder which can also be used for grinding other articles besides Spindles the Construction operation and advantages of which may be more specified and described as follows viz——

In the drawing hereto annexed AAA. represent the frame of the machine BBB. represent a common Shafe from which motion is communicated to the Carriage to the work thing to be ground CCC. said may a Slide on the top of the frame, on which the Carriage DD travels. The Carriage is moved from or other hand Pulac and horses back and forward on the railway or Slide. the length of the Spindle or other thing to be ground so as to present every part of it in succession to the Grinding Stone. The motion of the Carriage together with the rotary motion of the Spindle or thing to be ground to produce the required curve is derived from the drum BBB by means of both endless screw and Cog wheel, neither these part of the machine nor their relative positions are shown as they form the same part of the machine called the Spindle Grinder now in use. On the top of the Carriage is the Lathe that holds the Spindle or thing to be ground. This is also the old machine but its mode of connexion with the Carriage is various as well as the method of grinding

it will move in the Carriage from the Centre of the Carriage, a bout the Centre, to which one end of the edge of it, next the grindstone is pressed a sharp point which is fast in the Carriage but moves easily in a Slot in the Lathe. The Lathe might be turned backwards round on this pin if not for the pawl of the machine, to prevent which pawl from being moved as it moves in the Carriage and at the same time to give to the same motion forward and back that the Carriage has, the Handle of the Machine the Lathe has the same motion forward, and back as the Carriage and also a motion from side to side. The same effect may also be produced by connecting the Lathe to the Carriage by means of wheels on pullies made fast to the one and moving to grooves made to the other. But this manner of connexion though more Ingenious is less to the one first described.

On the top of the side of the frame next from the Grindstone one piece of metal standing upon edge as the Lathe. Attached to this is the back of the Lathe [illegible] against this back the Lathe rests by its flat edge backward and forward on the Carriage. The third piece which forms its connexion with the Carriage permitting it always to keep against it although it does not in a right line with the side of the Lathe. The same result can be obtained by having the back inclined from one the other side of the Lathe but not so conveniently. This is also claimed as part of the pitching of the Lathe against the back and also as the Carriage is diminished by the use of pitching pullies. The Lathe is kept steady and pressed against the stock by means of the pitching shaft and weight one of which is fastened to each end of the Carriage by a chain. The shaft passing up on a pulley on the Lathe from which the weight is suspended one of these is seen in the drawing and is marked H.

On the top of the Lathe one attached die by a screw bolt passing through a slot in the spindle and 2 more of the other sort inclosed. The thickness of the slot is equal to the diameter of the thing to be ground and its length depends upon the length of the thing to be ground. Against the side of this slot bears the Spindle of the Spindle a thing to be ground passes and rests By means of two screws

passing through a shoulder on the other side of the rest and playing
with the Stem passing through it from the other side the Stem working
in Hob in the rest, the rest itself is moved from the grindstone
& it is done away by use. The shape size and material of the rest
are claimed as new.

The Spindle or thing to be ground is held at each
end by a spring Centre or which it turns, motion being Communi-
cated to it by a belt from the Drum B.B.B.

The Grindstone turns in an iron Carriage on a
frame extending back at right angles from the frame first described
The Carriage with the stone in it can be moved on the frame & near
from the Spindle or thing to be ground by a screw in front of the first
described frame. The finishing line is diminished by the use of stones
finishing finally under the Carriage. The position of the Grindstone and the
manner in which it is moved with its Carriage and frame are the
same as in the old Machine, The back of the lathe B.B. &c described
is nearly like the other lathe and its shape is varied according
to the shape of the Spindle or thing to be ground.

In operating a Machine with this
improvement a rest is made corresponding in length and thickness
with the length and diameter of the thing to be ground and is affixed
to the lathe as aforementioned. A lathe back of proper shape is affixed
to the stand on the frame. The Spindle or thing to be ground is then
fixed on its centres in back of the rest pressing against it, Motion
being communicated to the Drum or pulley motion is given
to the Spindle or thing to be ground and the Lathe back
and pressure on its carriage the proper part of it being kept against
the lathe back by means of the weight aforementioned and the
pressure of the grindstone against the thing which is being ground
Motion being at the same time communicated to the Grindstone
and the Grindstone by means of the screw being drawn and kept
against the Spindle or thing to be ground as it passes in the lathe
the required shape is given to the Spindle or thing to be ground.

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The claim of [illegible] consists in the improvement of the Spin
dle Stock ground with the Inner back of the Lathe to uniform
in shape and size and the Latch performed with much less
expense than by the ordinary Method.

That I claim as my invention the
Connexion between the Lathe & Carriage by means of the Spindle Stock
Plane and Rest as aforedescribed by which each end of the Lathe is
left free to move to or from the Grindstone and the whole Lathe is
permitted to Vibrate the length of the Slot in which the Stud or Spin
dle moves ——

The Rest so called which guides the Lathe
being of such form as to keep the Spindle or Mandrel ground against
the face of the grindstone in such manner as to produce the shape
desired in the thing to be ground and also the use of weights to apply
in keeping the Lathe against said Rest and in keeping the Lathe
steady and the rest aforedescribed

James Whicator

Witness
Philip D. Mayrie
William L. Stokes

1650 mds

Drawing