

## Holtzapffel Eccentric Rosework Apparatus

As detailed by Nick Edwards in SOT Bulletin 95:221-3, the following excerpt appears in an 1893 sales ledger detailing business transacted with Frederick Coleman Hunter of 75 Portland Place, London (and later 5 Cavendish Square, London), who was the owner of Holtzapffel lathe No. 2391 purchased on January 15th 1889. The original document is in Guildhall Library, item MS 7475A.

The transcript below provides some useful clues to construction of the Holtzapffel Eccentric Rosework Apparatus, which Edwards succinctly describes as follows: "Basically the equipment is a Rose Chuck and extra outrigger for mounting an oval chuck, together with a slow-motion drive for the mandrel to be mounted on his Evans 6" lathe. An additional crane from the overhead drives the slow-motion drive. Some publicity had been made by Holtzapffel's for such a set-up in the August 19, 1892 edition of *Engineering* magazine."

*The original hand-written entry begins on February 16th, 1893:*

Making a gunmetal carriage to fit the triangular bar of your Evans' overhead motion, with clamping screw. The carriage supports between centres a long steel bar having at one end a pair of tension pulleys for the band and at the other a heavy cast iron balance weight. (£7-10s)

*The entry continues on March 30th, 1893:*

Making to your 6 inch centre Lathe by Evans & Co, an H & Co's most modern pattern Rose Chuck, for producing both solid and surface turned forms, as generally produced by the Rose Engine and Rose Cutting Frames. The apparatus consists of two parts, the first a chuck having two slides placed at right angles to one another, controlled by a steel ring or collar which is supported at the back of the chuck and carries the Rosettes clamped by a steel clamping ring. The foremost of these two slides carries a third controlled by a mainscrew of 10 threads to the inch with a micrometer to read to the 200th of an inch for giving eccentricity to the slide for eccentric turned rose work. This slide carries a wormwheel of 96 teeth with a tangent screw in carriage actuated by an improved eccentric cam for placing the patterns at any desired part of the surfaces of the work and for the production of solid eccentric turned forms. The second part is a Ring or Collar somewhat similar to that used with oval chuck, attached to the lathe-head by a pair of adjusting screws of 20 threads to the inch. This collar carries a slide working horizontally under control of two steel spiral springs in steel slides. The slide has a central fitting provided with a hardened steel lining which engages with the steel collar before mentioned at the back of the chuck, and the springs cause the Rosette on the collar to be kept in contact with a steel roller carried in a second slide on the face of the ring, which roller slide is adjusted to its required position by a decimal threaded screw. On the opposite side of the ring or collar is a stop screw which is used to place the oscillating slide "at centre" and to "stop out" or cut off any desired part of the bottom of the waves on the rosettes. The apparatus is arranged so that when the roller occupies the left hand side of the ring when in its place on the lathe-head as observed from the front, a copy of the pattern of the rosette is produced, but when the roller occupies the right hand side it reverses the pattern. The whole complete with 2 keys in ivory fluted handles, and a set of

6 rosettes 4-3/4" diameter; viz., D12, H12, S24, J30, J36 and K12, each adapted with 2 slots so that either the highest or lowest part of a pattern may be placed centrally with the eccentric slide.

An H & Co's apparatus to adapt the foregoing chuck for producing oval turned surfaces and solids, viz., A standard with a horizontal slide controlled by two adjustable springs to which is attached the ring of the ordinary oval chuck. The slide has a fitting with a steel collar to carry a transfer chuck, which, being placed on the nose of the Rose Chuck by a steel left-handed screw passing through it and screwing into the nose of the Rose Chuck wheel. The oval chuck is manipulated in precisely the usual manner, an index line on the standard giving zero instead of that on the lathe-head. The work should be prepared on the lathe-head and when placed on the Rose Chuck is screwed into contact with the rosette and the screw on the slide is released to allow the springs to control and the adjusting screw in the slide on the standard is withdrawn. (£75-0s-0d)

A case to contain the whole of the above apparatus, of mahogany, polished, with brass lifting handles, stayplates, lock and key, each piece inlaid and with compartments to contain 18 rosettes. Measuring 26-1/2 ins. long, 14-3/4 ins. wide and 6 ins. deep. (£4 -15s)

An H & Co's Automatic Driving Gear and Segment Stop apparatus attached to the lathe-head for giving a slow, equal motion to the lathe mandrel when the Rose or other chucks are used or for Spherical Chuck or Segment work. This apparatus is added to the Tangent screw and wormwheel of the ordinary Segment apparatus and consists of Standard, or Post to which is attached a movable steel carriage carrying a tangent screw, that when in action gears into a tangent wheel placed on the end of the tangent screw usually occupied by the micrometers. The post also has a rod having a movement vertically upwards and downwards. This rod has adjustable locking nuts so arranged that when the segment pins come into contact with them the movement given to the rod in either direction causes a catch to be withdrawn from the tangent screw carriage causes a catch to be withdrawn from the tangent screw carriage and allows the carriage and with it the screw to rise and leave the tangent wheel, which immediately ceases to revolve, although the tangent screw, driven by its pulley and band continues to do so. There is also a lever to cause the same action by hand when required. The Standard is provided, in addition with a pair of adjustable stop screws so that the apparatus may be used either as an ordinary Segment Engine, or it may be caused to start from a fixed point and throw itself out of action and stop at any required point in either direction of the revolution of the mandrel, or may be used as a slow continuous driving apparatus, being stopped by the Hand Lever when desired. The whole apparatus is attached to the lathe-head by one square headed screw and may be readily detached when not required for use. (£15 -0s-0d)

### References:

- 1) Society of Ornamental Turners Bulletin 95:221-3
- 2) Guildhall Library Item MS 7475A, Gresham St., London
- 3) *Engineering*, August 19, 1892