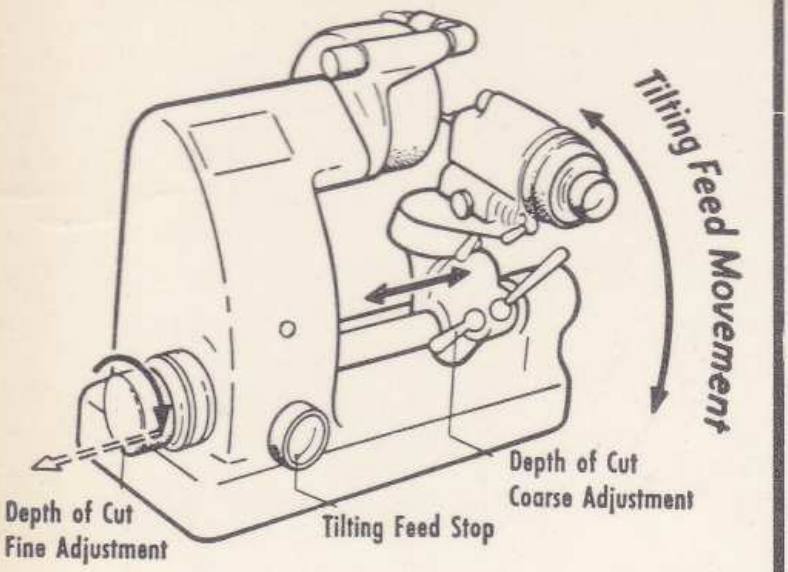
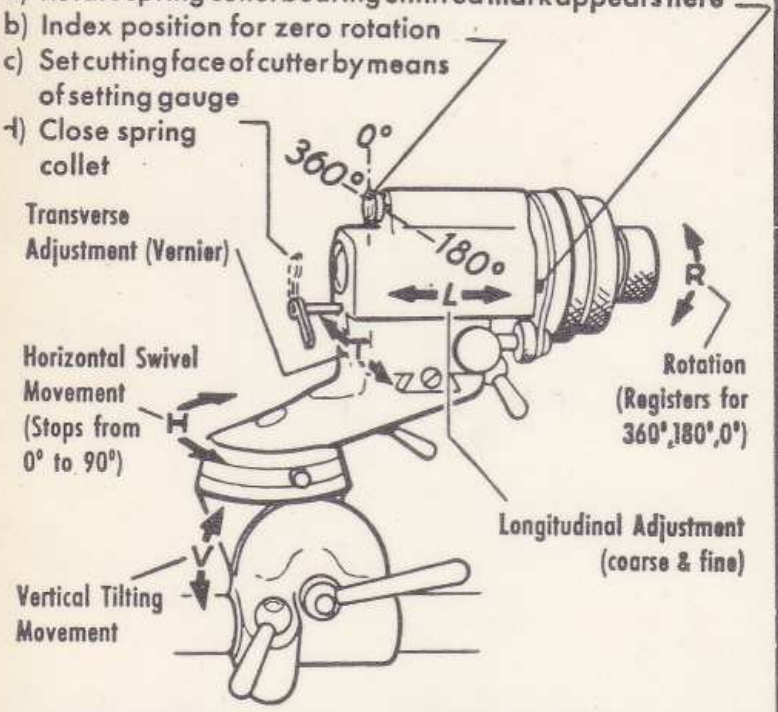
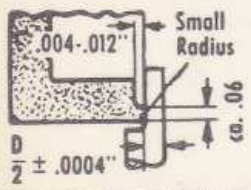
Setting-up and Operating Movements



To adjust cutter to be ground,

a) Rotate spring collet bearing until red mark appears here
b) Index position for zero rotation
c) Set cutting face of cutter by means of setting gauge
d) Close spring collet



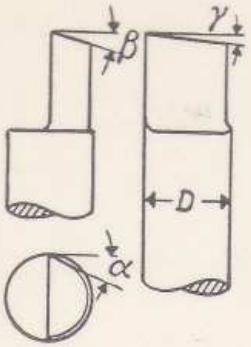


Grinding the Cutting Face:

Dress wheel face to leave only a small margin (to reduce heating)

Material to be Cut	α	β	γ
Grey Cast Iron, Cast Steel, Machinery & Tool Steel	25°	15°	5°
Brass, Bronze	30°	15°	5°
Aluminium, Wood, "Resopal", "Pertinax", Fiber Material	35°	15°	5°
"Trolon"	25°	15°	5°
"Astrolon", Celluloid	45°	25°	20°

1. Cylindrical Cutter with End Relief:



I. To grind diameter circular,
(a) Adjust cutter; set register for 360° rotation;
(b) Tilt cutter to set it for angle α
(c) Select depth of cut by coarse and fine adjustment; grind diameter D circular.

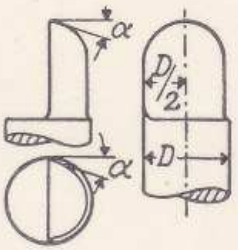
II. To relieve lateral cutting edge,
(a) Set register for 180° rotation;
(b) Relieve cutting edge until a very small land remains of circular diameter.

III. To relieve end cutting edge,
(a) Set cutter at initial position; set register for zero rotation;
(b) Tilt cutter to set it for angle γ;
(c) Swivel cutter to set it for angle β;
(d) Select depth of cut by coarse and fine adjustment and grind cutter.

IV. Stone cutter carefully.

Re III: The end cutting edge may also be relieved manually

2. Cylindrical Cutter with Rounded End:

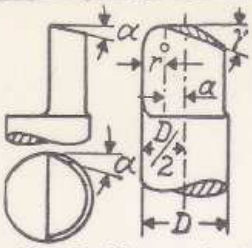


First set vernier at zero, then
I. Grind diameter circular as in Section 1;
II. Relieve lateral cutting edge as in Section 1;

III. Relieve rounded end as follows:
(a) After lateral cutting edge is relieved, swivel cutter 90°; use coarse and fine adjustment until end face of cutter contacts wheel;
(b) Relieve radius by swiveling and rotating cutter (180°).

IV. Stone cutter carefull··

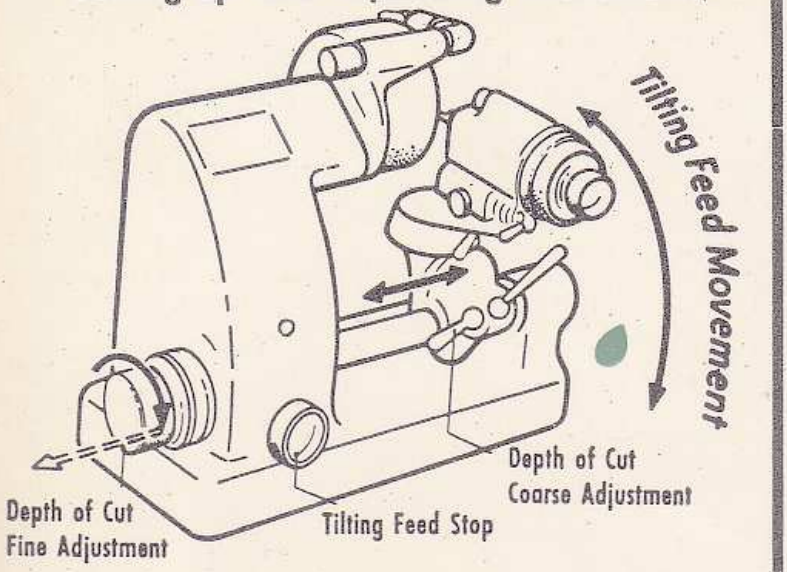
3. Cylindrical Cutter with Off Center Radius:



First set vernier at "a" (= D/2 – r), then
I. Grind diameter circular as in Section 1;
II. Relieve lateral cutting edge (Section 1);
III. Relieve radius and end cutting edge as in Section 2;
IV. Grind end of cutter (shaded area) manually to produce approximate angle γ; stone cutter carefully.

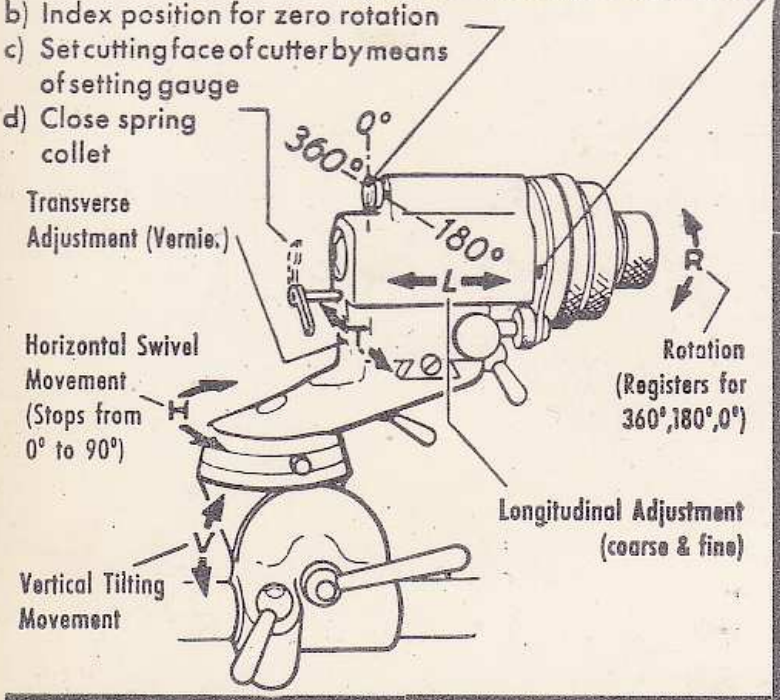
BRIEF INSTRUCTIONS FOR SINGLE LIP CUTTER GRINDER "SO"

Setting-up and Operating Movements

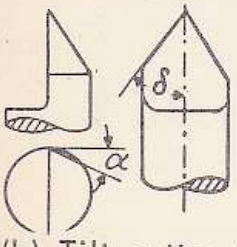


To adjust cutter to be ground,

a) Rotate spring collet bearing until red mark appears here
b) Index position for zero rotation
c) Set cutting face of cutter by means of setting gauge
d) Close spring collet



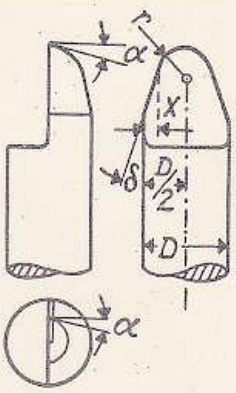
See reverse side for instructions on grinding the cutting face angles α; β; γ



4. Cutter with Pointed End:

I. To profile and relieve the cutter,
(a) Adjust cutter; set register for 180° rotation;
(b) Tilt cutter to set it for angle α;
(c) Swivel cutter to set it for angle δ;
(d) Select depth of cut by coarse and fine adjustment; grind the relief.

II. Stone cutter point as far as type of engraving work permits; stone cutting edge



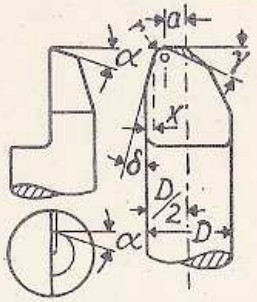
5. Tapered Cutter with Rounded End:

First set vernier at zero, then

I. Circular Grinding:
(a) Adjust cutter; set register for 360° rotation;
(b) Perform coarse adjustment of cutter towards wheel; use fine adjustment to bring diameter D into contact with wheel;
(c) Set cutter laterally by x (= D/2 – r) and perform fine adjustment using the scale;
(d) Swivel cutter 90° and adjust longitudinally until cutter end face contacts wheel;
(e) Swivel cutter through angle δ (use stop);
(f) Grind cutter circular.

II. To relieve lateral and end cutting edges,
(a) Set register for 180° rotation;
(b) Tilt cutter to set it for angle α;
(c) Set cutter with coarse and fine adjustment, then relieve lateral cutting edge; swivel cutter and rotate it 180° to relieve radius.

III. Carefully stone cutter.



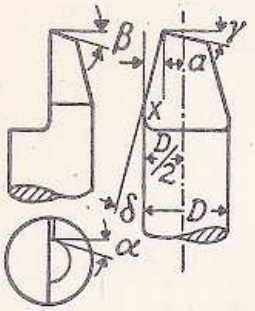
6. Tapered Cutter with Off Center Radius:

First set vernier at "a", then

I. Grind cutter circular as in Section 5, but use x = D/2 – (a + r);

II. Relieve lateral and end cutting edges as in Section 5;

III. Grind end of cutter (shaded area) manually to produce approximate angle γ, stone cutter carefully.



7. Tapered Cutter with End Relief:

First set vernier at "a", then

I. Grind cutter circular as in Section 5, but use x = D/2 – a;

II. Relieve lateral and end cutting edges as in Section 5;

III. Stone cutter carefully.

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