

Adjusting 400 day clock escapement  
 " (where angels fear to tread)  
 \* Settings of escapement

- manual setup
- no wear / power available to minute
- extra gear, higher gear ratio } (8/400 days Factors)
- "power to escapement" - most issues you come across

our focus: Gravity / Torque

slide 2

- "Rate / lock and Drop"  
Pallet will make the  
inter changeable - matched  
to the escape wheel...
- ✓ Factory settings
- eccentric depth button
- adjust the pallets

① Graham + ② Pin Pallet  
 Dead Beat  
 FILM 1880  
 Superior

exceptions:  
 ① Verge, ② Cylinder / Pin wheel  
 crab claws  
 escapement

① pallet machined  
 in one piece

- over-run in  
 pendulum

Slide

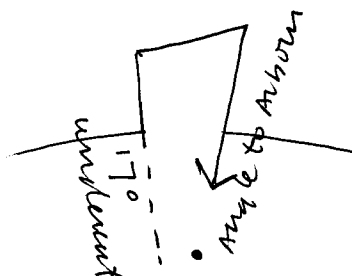
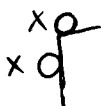
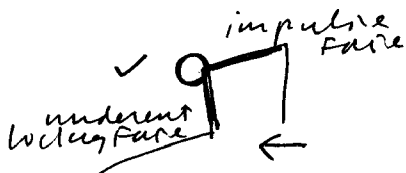
entry drop / Exit drop  
 locking face  
 \* Drops should be equal  
 \*\* Locks should be equal




- Eccentric Button caution  
 → ↑ always the same one

- ② Pin Pallet

x BUTLE pair, don't attempt to turn  
 xx Don't attempt to drill out steel pin  
 Scribe reference points  
 IF removing  
 [quiton strings - music shop]



② continued: Factory Set all obvious ✓

Tell tale sign:  Tell tale damage / tampered with  
wheel interchangeable (chart 49)  
Loosen eccentric button <sup>to name are copied + then when taken</sup>



warm the plates when apart  
see metrics, expect the changes

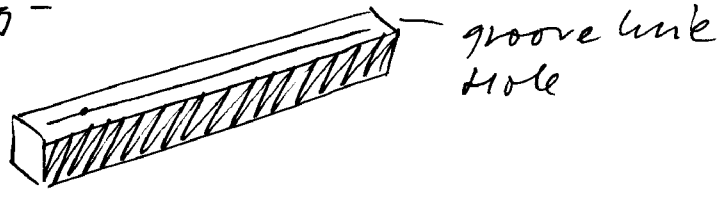
Think Mootings page Terwilliger  
right hand column of note  
questions also the eccentric nut  
now moving pallets up & down

moving the  
Break:

Final step to getting the clock to run

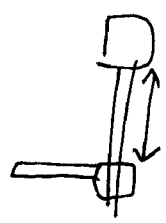
Thoroughly Clean

Horobler main springs (note only)  
x 2 1/2 timer the Rance - Tell tale sign of a  
Faulty spring - <sup>Hand width</sup> x no. of spring strength



- wire length to cut  
- lock bottom block first  
- fork adjustment

\* - optimum position of the fork



almost all the action  
happens here

### Anchors pin'

always vertical!  
in two planes"

Basically needs no alignment except for  
some nuances 

CAP SET-UP

- Gap on anchor pin and Fork!
- check ~~the~~ both sides

\* nuts are screwed in 'not' stakes in'...


\* clean up hole

- sliding fit at the extremes of arc
- Fork sliding on pin must be movement slide - no slide, ease out slightly

(\*) pin must be rock-solid  
any movement will rob the power

- critical at the extremes
- (\*) must have just enough freedom

ALSO  
\* The 2 lines must be parallel

 Burnish inside Forks + Anchor pin

Look for:

- single point of contact!
- Double screw set better than single screw
- Pendulum in Beat? EQUAL  
equal amount of run on / entry + exit
- Beat Setting Tool - know what demonstrated -  
with additional Tweener use on older me 1900 models.

- Tweener to set beat on earlier fixed block setups...

Be careful with me / not available now eBay - Tweener

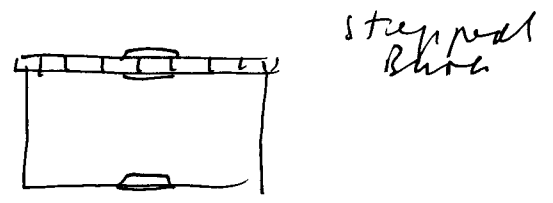
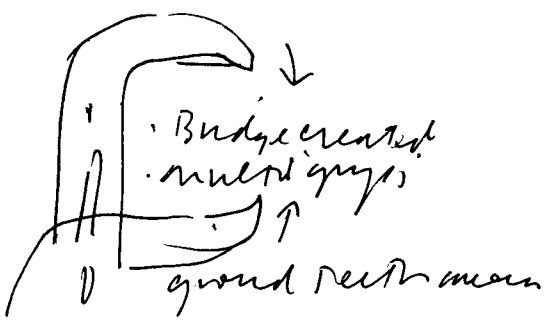
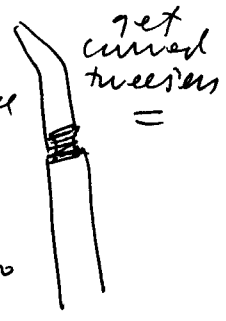
- 7 Height of the Fatc - <sup>D</sup>  
 \* Start with the slope the drawing process  
 - The further down the shorter the arc  
 (which opens for which model)  
 - Higher you go up the stiffer the opening

ADVICE

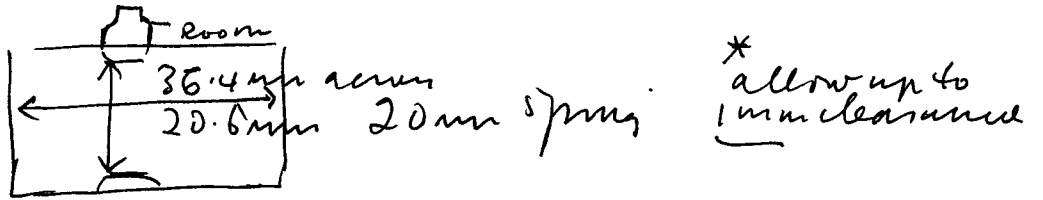
- \* Setup on minimum power is best, couple of turns
- 8 270° of Rotation / 180° for Becker  
 also for miniature midgets  
 (start at 360° and let them build down)
- 15 minutes to settle down...
- 9 Adjustments / weight inside side  
 knurled wheel adjustment  
 if not getting results - change spring to stronger or weaker  
 \* use beats per minute 8 = Midgets 12 = stop watch / check over spin, work backward
- 10 • Bobs in faster out slower  
 • Longer suspension will be slower  
 • Full adjustment will give 4 records per minute adjustment.

# - Breakdown

- suspension off
- power down (5 1/2 turns)
- dial off
- see any wear - pivots
- inspection with eyes - rock barrel - rock film - etc
- need re-Bushing? Ream to (5° face after bushing) almost no gap MINIMAL
- expect to hear wheel drop also wheel falling under own weight both ways
- Re-bush up to centre wheel
- check escapement / polish pivots now at the top:
- in motion work / click off
  - remember the eye washer! leaf springs
  - check draw mark on eccentric button
  - Barrel Plate off
- wheels laid out on plate
- Box © LB - minimal involvement
- not using Brew / manual wheel clean / polish pivots 2000 grit / antoool on pivots. minimum req wood / polish
- Barrel Bushes



- Spring evaluation stepped bush



$20 \times 36' - \text{paper check} = 19 \times 36' H_{\text{Book}}$


$\left[ \frac{\text{Barrel dia}}{1000} = .3 \text{ mm spring} \right]$

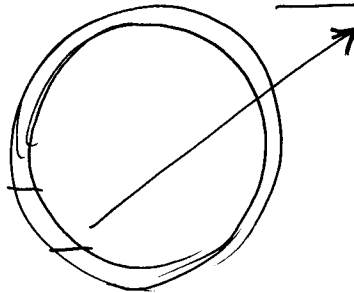
- specifications  
- optimum amount of spring in barrel  
50% spring remaining

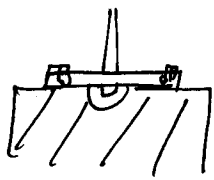
Email Lindsay for pins to share

= Excel spreadsheet application to work out the length required of spring from barrel dimension

- check pallets  
mark T/D mark if breaking down

- OD/ID  make up a set of Pallet Pins



-  support on block  
screw driver Right hand  
apply even pressure

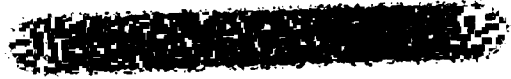
- check all wheels + check the tips of teeth straight - aligned across - <sup>the bar</sup> not drop - not parallel.

/// Tweeder Teeth - strike out in vice evenly spaced - End O.D. min. length diameter - 90 around

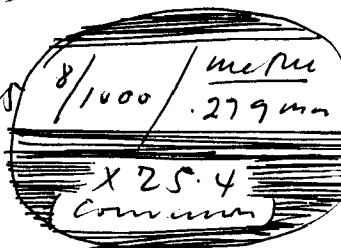
- Day Two:

- Pin Pallet

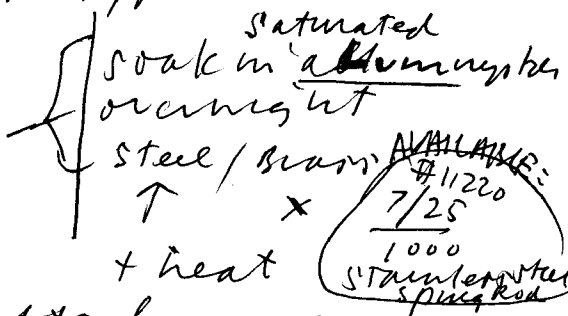
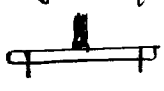
Quotation: Good Day  
= \$200.- going/movement  
= \$600.- polish + finish



- pin replacement
- measure dia
- guitar strings
- pin prep.



- tapered one end
- status set / punch out old
- soak in saturated alumina for overnight
- steel / brass
- + heat
- \* Try not to change any hole / relationship
- MUCH FINER ENGINEERED = CARRIAGE WHEEL



- Tholos / Bandstand reviewed

- Badish - Puffed Brighton Pavilion

- Kaiser

Umm...de

madea replacement vision:

- Shatz 63 Ball Dia's same as the world
- silk screen work
- Interact click work - Kiesel
- Huge Barrel - more the moon
- Barrel - no lateral movement
- Double pivot on suspension
- [ Drop & locks = 2° = how far up the pallet, where does it hit under low power? if not the tooth is fine

\* Test / copper paint and prep demonstration...

REVIEW:

- Shatz 49

- Good quality
- solid pallets
- Anchor pin - moved forward
  - more arc
  - less power
- no clearance
  - clearance on foot
  - no leaves
  - parallel lines
  - Anchor pin verticle
  - staked in...
  - verticle in both planes
  - set down / equipment
  - more load at front because of wheels + pivots
  - re-bush rear wheel when
- ✓ eccentric Button in line regard pins / marks
- Equipment / Thumb pressure

4/1000  
surp  
springs

- V F

- Top block
- side lock screw
- Rare clock

DRP  
J

W. ← WIRTH  
1049A

- Dome exceedingly small
- Dia Dial 53 mm
- Early Dia Randed →
- Larger /
- (non unique crest Shatz)
- Different to find /

Hobby

- solid pallets
- centre wheel re-bushed
- eccentric ok
- barrel
- guard /
- Bottom block unique
- unique rate
- Top crest
- equipment

Medusa  
Trippid  
men bending over  
Thread adjuster  
(snapped)  
✓ in that det screw  
"House Thread"  
7 BA / 4/1000 springs



1850 - 1930/4

- Gustav Becker / 4 <sup>premium</sup> Ball

168 Minuts / <sup>Drawn</sup> Min: Beat Adjuster

- in Annotated
- usually gone, screw missing - throw out
- beat suspension guard
- Tab Restor cross pin
- Top Beat adjustment system on Becker Bayonet fitting, 1 hole + Reg

Made in Silesia Poland

Deluxe  
Bow Tie  
| Co Co |

steel cap  
| Brass |

nut, steel  
| Paper pads |

- p
- not even plan
- clean / wear
- escape wheel
- no plan
- Teeth dep't pile /
- exit / dep tooth onto impulse face
- entry not locking deep enough
- not deep enough for date lock  
(.2 min below Depth on lock  
increased)

Dropok  
\*

<sup>KS</sup>  
- Kern miniature 3 ball

- ⊙) Penusular / eccentric button
- internal kernel slide and did the back plate
- Spring almost fully wound X trouble to let down
- Anchors pin kink

Early Kundo 1923

1930  
Jungmann  
made  
3.242

1149



+ Voltage Regulator  
look into  
"Tortron Times"

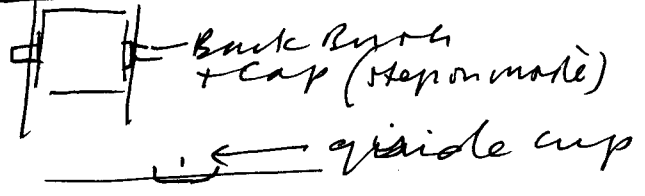
showed his personal notes collection  
Bull's  
propco@ix.com  
Peter Smith

a guide to electrical insulation  
Kovacs USA  
Electrical Insulation  
Manufacturing  
SWEET'S

1954 Escatron Model  
Shatz Small 4 Ball 3/50

1953 miniature  
extra Plate  
1000 day  
managing  
Panel

JVF  
wall clock  
"Panel is identical replacement"



M = magnets

magnetism in clocks  
electromagnetic principles  
attract / repulsion  
ATU

10% of members  
start small special interest group

two poles

start with "Electricity"

Rod Elliott - runs what was of 10 lectures over 1 month

NOTES

Radios

then to applications in clocks

year

2 year

5 workshops  
specialized to particular clocks

Statto

electromechanical  
- Palomide  
- small managing wound drive me  
Resonance 20-60 sec rewind  
- gravity arm

+ synchronous motor

frequency of clock  
50 Hz - Resonance frequency  
power supply

same number of cycles per day connected

Domestic /



— Remagnetising  
Bar Magnet  
Demonstrations

— HOMEMADE  
Gauss Meter  
using ket  
pen inkjet

—