Re: Clock Project

Source: http://sci.tech−archive.net/Archive/sci.electronics.basics/2007−03/msg00408.html

- *From*: Rich Grise <rich@xxxxxxxxxxx>
- *Date*: Fri, 09 Mar 2007 19:21:45 GMT

On Wed, 07 Mar 2007 16:25:33 −0800, North Coast Igor top−posted:

> Right, Ed. Time value is incremented by the escapement period time value.
> (This is true of every mechanical clock, when you think about it.)
>
> I didn't provide detail on the "escapement mechanism" b/c it's not
> important regarding the portion I need help with. The Increment will be
> many seconds and you understood perfectly. The "ecapement mechanism"
> operates over a repeatable−enough period of time and THAT time period will
> be the "increment".
>
> My own thought since I described the problem is that instead of counters,
> gates and DIP switches, a small microprocessor chip would be the easy way
> to program the increment function (especially regarding
> re−programmability). −−probably cheaper, too.

First, you're supposed to bottom−post, to follow the natural flow of the thread.

Given that, google "compound pendulum" − you'll find some really impressive−looking designs for pendulums (pendula?) of practically unlimited period, probably even adjustable ones.

Good Luck!
Rich

> North Coast Igor − Marc
> ehsjr wrote:
>
> > North Coast Igor wrote:
> >
> > > Thanks for the reply, Anthony.

> You understood okay, but I was thinking of a complex escapement
> mechanism that is amusing (?) to watch and has a period of many
> seconds. Accuracy is not a goal here; the goal is more: "you can keep
> time with THAT ?"
>
> The latched increment input into a clock driver is the part for which
> I'm seeking help.
>
> Thanks again.
>
> Marc

I'm lost on your description, too.
Do you want to _add_ the incremental value to the previously stored value each interval?

Ed

> Anthony Fremont wrote:
>
> > igorshump@xxxxxxxxx wrote:
> >
> > > Would like to build a digital
> > > clock with a long−duration
> > > mechanical
> > > escapement ("artistic" part).
> > >
> > > I found Bill Bowen's site
> > >
> > > http://ourworld.compuserve.com/homepages/Bill_Bowden/
> > >
> > > and could probably decipher
> > > something here, but thought
> > > I'd try for
> > > some advice/ shortcut.
> > >
> > > I envision empirically
> > > determining the periodicity
> > > of my "escapement
> > > mechanism" and inputting

> that time period into my
> clock via dip
> switches.

I had to read this a couple of times before I got it (I think). If I
understand you, you want to use a pendulum of arbitrary length (and
arbitrary period) and then have this advance the clock mechanism the
correct amount for each swing. For example, say you used a 1 meter
long pendulum with a period of 2 seconds. You would want to advance
the the clock 2 seconds each cycle. Correct?

> This number (not much
> resolution needed due to
> mechanical vagaries of
> long−period escapement)
> would then be latched into
> the clock
> electronics to provide the
> clock increment.

Not sure what you mean here, there is nothing vague about the motion
of a pendulum.

> One could call this a
> "variable increment clock", I
> guess.
>
> Could someone point me to
> a circuit that comes close to
> this?

Bryan Mumford has something like this going, but he uses a pendulum to
generate the pulses to an electrical drive system for the hands. He
keeps the pendulum going with magnetic impulses. The impulses are
triggered by the pendulum itself, so that the

pendulum is the thing
actually keeping time.
http://www.bmumford.com/clocks/em2/index.html

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