

sends you his wishes for health, wealth,
& prosperity, & hopes that you are
getting more famous than ever.

Do you want a photoelectric
cell which will register continuously
the intensity of the blue rays of
sunlight? I have hit on one,
& I am going to register it
for the present. It might be
useful in an observatory.

It requires a galvanometer

We are now going out to walk
in the Park.

Give my regards to Mr. Ball &
best respects to Mother Robin.

Yours truly,
Edw. M. Minchin

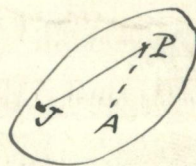
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Coopers Hill College,
Nov. 7.

Dear Ball,

I have hit on a theorem
in Kinematics which seems
so peculiarly suited to the "Screws",
that I searched your book for
it. I have not found it, however,
there. Hence I write to you
about it.

When the motion of a
rigid body is all
parallel to one plane,



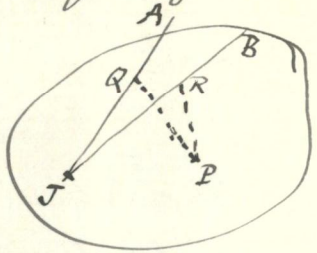
there is always (considering only a section
of the body parallel to the plane of motion)
a point, J , of no acceleration at
every instant; and the acceleration of
every point, P , of the body is directly

prop^l to JI , and its direction, PA ,
 makes an angle $\tan^{-1} \frac{\dot{\omega}}{\omega^2}$ with JI
 where $\omega = \angle^{\vee}$ vel. of body at any instant
 $\dot{\omega} = \text{" accel^{\vee} "}$

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generally —

In every case of motion of a rigid
 body there is at every
 instant one point, J ,
 of no accelⁿ and
 the acceleration of
 every point, P , consists
 of two components thus defined: at J
 draw the axes, JA and JB , of resultant
 angular velⁿ and resultant angular
 accelⁿ; from P let fall perp^s PQ &
 PR , on these lines; then one component
 of P 's accelⁿ = $\omega^2 \cdot PQ$, & is directed
 in PQ ; and the other = $\dot{\omega} \cdot PR$, and is
 perp^s to PR and to JB .



In the first case we have an
instantaneous acceleration centre,
 analogous to the ordinary instantaneous
 [velocity] centre — which latter is
 long & well known.

Not finding this theorem in your
 "Screws", I have sent it to
Nature; but perhaps it is in
 your book, after all. If so,
 you might drop me a line.

You arrived in London at
 a time when I could not
 get away from S^t. Leonard's,
 having been detained there
 unavoidably; but surely you
 will be over here soon — lecturing
 somewhere. If so, we shall all be
 delighted to see you. Really
 (in whose study I am writing this)