



天下太平

地仁

算律

二三四五十六十



Diving Bell

1 Calculation — A cubic foot
of fresh water weighs 62.5 lb
— A Gallon = 8.33 lb

— A bell 3.5 feet Diameter at the Large
end & 2.75 feet D. at the small end
and 3.5 feet high with depth
23.47 cubic feet of water ~~1466.8~~ 8.33 lb

From this deduct the weight of the
Bell and the remainder is the weight
to be hung on the bell — Deduct
also the weight of the diver

2. A cubic foot of air will support
a man for 4 minutes without
any assistance — but during
however one cubic foot should
be served for every 3 minutes
in which case no accident can
possibly happen from want of
air —

3. The trouble and expense of pro-
curing Dephlogisticated air for
the whole supply is too great but
a quantity of this air mixed with
Atmospheric air would be an
improvement —

4. Condensed air has been proposed
but ~~this would~~ the trouble
and expense of procuring it

would ~~not~~ greatly exceed the
advantages derived from it

3. Doctor Waller's original mode
of supplying the bell with air
is the best

6. Added to prevent the bell
turning round in a current
— magnetic needle to show
which motions the bell may
receive

7. Air vessel in form of the
bell but narrower below
made of metal —

Experiments

1. Down and up immediately
- quite dry -
2. Signals - Air sent down -
3. Articles hooked -
4. Book - paper pen and ink
5. Phosphorus match - Gerbes -
6. - Augmentation of Sound -
- Magnetic needle - Electricity
- Music - sound common
- called to the surface -
- Bell raised by Descending
the balance weight -
7. Small downy bell of glass
- Bird - mouse - paper - paper
- quickened air -

8. To beat a Long below —
9. To try the effect of condensed air
on scents — bot. alk. mixt. —

Doctor Walley's Pump Bell
contained 60 cubic feet was 5 feet
in Diam at bottom and 3 at top,
two air barrels 36 gallons each
care with lead —