

Lewis

and

Mills

Vol. 15

London 31st July 1792

2270. The East India Co^{rs}
are liable to a fine of
500 for every ^{Lib} of Opium
found on board the ship -
it spoils the tea -

2271. What are the principal
perfumes imported from
China

2272. A Register office for
Artificers would be useful

2273. In the Chinese Government
there is no Disturbance
but that of Opium - This
ought to be the foundation
of all Governments -

Miscellaneous

~~27th~~ When the offer of
Nootka Sound took
place the Emperor of
China observed that the
Kings of Spain and Great
Britain were going to see
to determine who should
import Jans to China as
a token of peace therefore
he thought it his duty
to prevent bloodshed by
prohibiting the importa-
tion of Jans into his Empire



X
2275. Am bingear is worth
about 2 grains of silver
— per ounce —

Manufact
~~2276~~ The reason
why candles can't
be cast in the wax
softly — 2277

~~2277~~ Wax or
plaster of Paris
is found into a
bottle so it sets
or cures the bottle
with dust —

~~170~~ Berthollet's new
salt may be made
as follows into a jar
with a bent tube pass
marino acid with a
of powdered manganese
near, let the other
end of the tube be
inserted into a jar
of oil of tart. & Del.
The jarms will work
with a vegetable alk
and then sublimato
escape, crystals
with the same, N.B
after the jarms has
continued for some
time apply a gentle

Chemical

Put to both jars —
Both may be placed in a
sand bath

2279. A quantity of copper
in a kind of Cal white
calced & blasted state
was by accident shipped
at Canton, and brought
to England, nothing
could be made of it
till it was proposed
to fuse it with about
 $\frac{1}{3}$ of Zn, when good
Zinc was the re-
sult. The copper was
perhaps prepared with

McAdams 9

iron - Tungsten is a most
useful metal -

~~2200.~~ English ropes

Manufact

are with three
strands, the French
and Spaniards four

~~2201~~ Je paracheve

Experein

is inverted it moves
more steadily, gear up
it moves faster?

~~2202.~~ It is said that the

Experein
Chairs

Chinese join together two
large Umbrellas with
a stick on which they
rest their heads by the

apparatus they descend
30 or 60 feet
+
2283

Wendover 26 Sept 1872

This day went on board
the Wendover. Having had
difficulty to get on board
The Capt. and Lt. Col.
Went climbed up a
rope ladder at the
stern —

Sea Journal
+
+
+

The Lion made
the signal to weigh
and sailed from Spit
head Monday about
10 o'clock

— first mile Torbay
on Friday about 2

~~2284~~^X. The Omnia are
said to publish a great
many newspapers —

~~2285~~. Do not earthquakes
frequently happen when
the sky is perfectly
clear? if so is not
this an objection to
the Electrical hypo-
thesis?

~~2286~~. In the Royal Ob-
servatory at Greenwich
the planet has several
holes in it, by this con-
tention it soon sinks
in the water —

Mr. Milner

When over

~~2707~~. The mural arch
made by Bird for the
observatory at Aclunburgh
was about two years
ago lying in its case
on the floor and had
never been unpacked
tho' three upwards of
16 years —

~~2708~~. When the King
of Sweden visited Aclun-
burgh, the instruments
in the observatory were
all closed up, the trap
and iron with breakfast

When over

When over

~~2199~~. The usual rule for
ascertaining the Tonnage
of a ship is inaccurate
if the vessel be short
built, the rule will some-
times give $\frac{1}{10}$ too little,
if flat $\frac{1}{10}$ too much
By the Company's mea-
sure the *Minerston* is
1240 Tuns, her real
Tonnage is fifteen hundred

~~2200~~ - A new method
is said to be introduced
of ascertaining the Ton.
by the weight of water
displaced.

Newyobur

D. M.

277. Goods sometimes pay
freight by measure —
In this case 40 Cubic
feet make one ton —
Light and consequently
stubby goods are mea-
sured in this way —

Navigatin

~~278~~ The Log is always
placed on the Lee
side, the Eddy on the
weather side would
render the Experiment
inconclusive —

Navigatin

~~279~~ The Reel with the
Log line is held over
the head and never
saw —

Down

~~2294.~~ A large log is used
for ascertaining the Dist
of currents, but it is shod
would be of no use in
common practice —

~~2295.~~ The Cator must a-
bounds in Madras
quer what is the best
method of distilling the
oil —

~~2296.~~ Is the expression
They can be forgiven
the good language?

Remarks

Admission

~~2296~~ Harmonical

Proportion
A — C — P — B

$AB : AC :: DP : CB$

or in numbers when
in three given numbers

The difference between the
first and second is to the
difference between the 2^d
and 3^d — as the 1st to the
third — or in 2^d members

the Diff: of 1st and 2^d ::
Diff 3 and 4 as 1st to the
fourth, and Contra Har-
monical proportion

is when the Diff 1st and 2nd
is to the Diff. 2. and 3rd as
the 3rd is to the first.

Examples

$$6 : 8 : 12$$

$$2 : 4 :: 6 : 12$$

$$6 : 8 :: 12 : 18$$

$$2 : 6 :: 6 : 18$$

Contra -

$$6 : 10 : 12$$

$$4 : 2 :: 12 : 6$$

~~227~~ 7. The Zenith Scale
was invented by Doctor
Wool for the purpose
of discovering the parallels
of the Stars - By this
Instrument (Doctor
Wool) discovered the
Magnetic of the
fixed Stars and the
Position of the earths
axis - The instru-
ment is better calculat-
ed than the mural
arch, to measure
small angles near
the Zenith and by this
one on the to determine
the attraction of mountains

Magnetic

and ascertain the angles
in the measurement of a
great circle of the earth -
It is placed in the
plane of the meridian
with its face either East
or west, and when ad-
justed must be put parallel
with its face to the East
and the telescope directed
to a star observing the
angle, then turn the
instrument to the west
and if the star has the
same angle the instru-
ment is adjusted, if they
differ, half the quantity is the

1. Suppose the ship is
to be run a shore what
direction, and where
head or side of the ship

2. What a ship is close haul
the main top mast goes
and board what is to be
done? — Ditto any other
mast or top mast —

3. A ship is on the ground
a smart breeze and a
Lee shore, the sudden gust
away — ditto what is to be
done?

4. A ship is driven on
in weather how far to
windward what is the best
way to come up with the
ground the shore board!

5. Has any considerable difference
been observed between the
sailing of a ship on different
sides?

6. What is the safest place
for boarding a ship out?

7. A ship's way is increased
by wetting the sails what
is the best method of pre-
venting this?

8.

Adjustment which must
be made by moving the
the wires of the Telescope
the same plan is observed
any time, the of time
must be made
of the
the or
the upper

the

water

the

the

5. Was any considerable diff
been observed between the
sailing of a ship on its
tacks &c?

6. What is the case
for boarding a

7. A Ship
Key

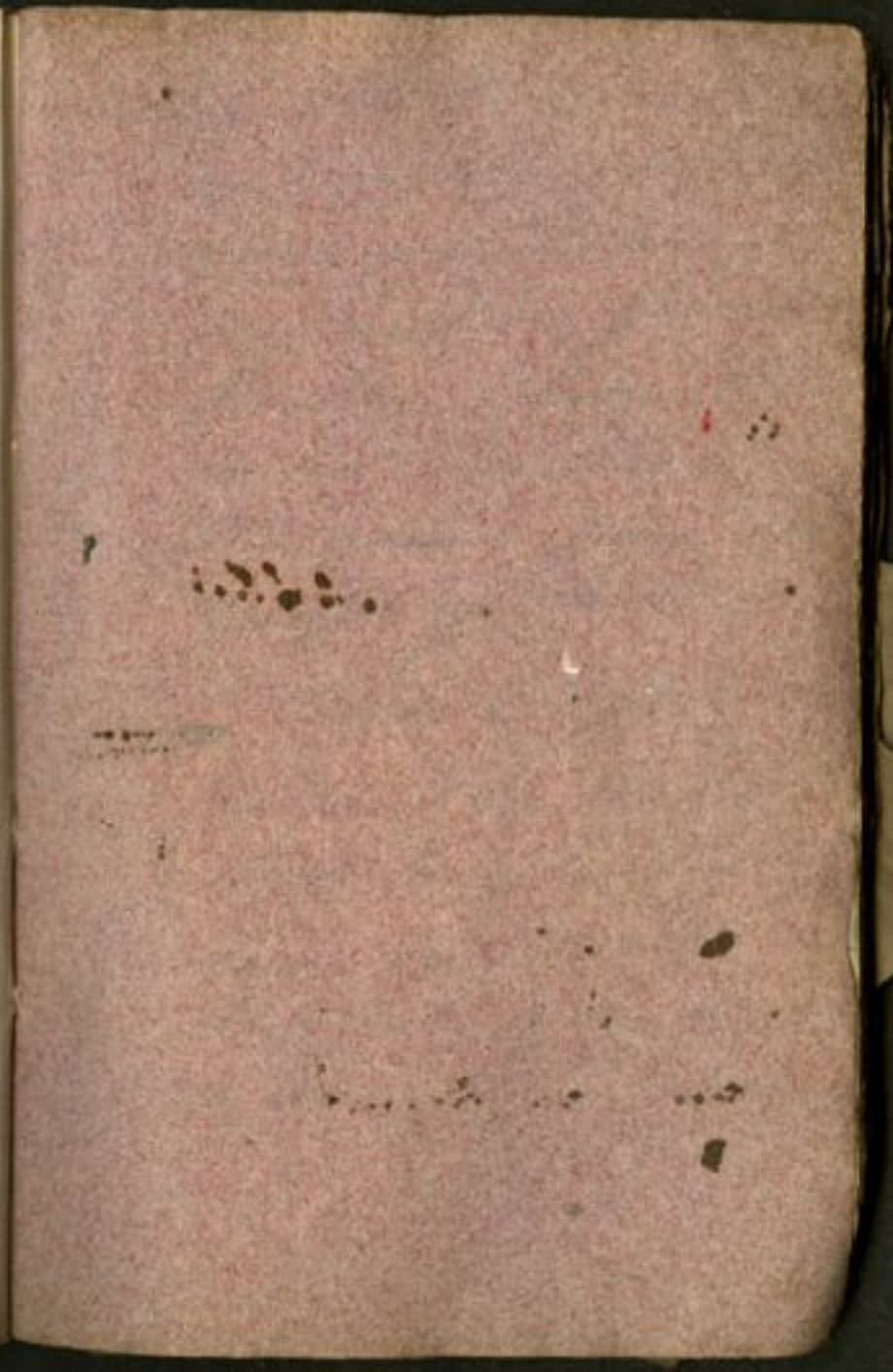
Adjustment which must
be made by moving the
cross wires of the Telescope
— If the same star is observed
for any length of time
observed must be made
for the change of the
star's declination or
altitude and precession
of the Equinoxes —

Doctor B. began his
observations with this
instrument on 7 Decem-
ber in order to determine
the position of the fixed stars
he continued them for 26
years in which time he
found the altitudes were

mutation and proved there
was no parallel

~~270~~ The mutation is
owing to the retro-
grade motion of the
moon node, when the
ascending node is in
Aries is obliquely in
18" or 19" more than when
in Libra

When only



~~2799~~ At the Canary
and western islands
great quantities of
red mud are found
floating where there
is no sounding —
This comes from the
Gulph of Mexico —

N. Anthony

~~2800~~ What effect has
the wind on the Mer?
Bell painted different
colours by Cavallo —
— That take advantage
or disadvantage —

Expansive

~~201.~~ What is the pro-
portional effect of boiling
leaf in salt and in
fresh water —

202 — To try the effect
of Charcoal Dust in
Water —

203. May not a spirit
be distilled from the
Cocoa nut and other
fruits of the Tropical
regions to advantage
Fermentation can easily
be brought on
by the use of heat

Charcoal

of the Simile —

^x
2304. Semetorius not
Antorius was the in-
ventor of the Helic
chain —

~~2305~~. What is the greatest
Strength to which out
of Steel can be stretched
Chamisso

2306. Rule for oblique
angled Spherico-triangle

Matheson:
1. Sines of Anal. Sines are
∴ Tangents of the Adjacent
2. Cosines of the Analogous
Segments are ∴ Sines of
the opposite parts —

~~2207~~ The same complete
masks as in Napier's
rules —

— If the three given parts
are contiguous the per-
pendicular must be drawn
to one of the extremes, with
which the part required
if they are not contiguous
The perpendicular must
always divide two un-
known parts —

Narrical

X

~~1750~~ The shortest way as measured by the Log is little more than half work - Many a blow and being made - See way - every day sailing &c

~~1750~~

Museman's

In the Bay of Juncall Madria the report of the Lyons Guns produced a few who, this Echo was heard distinctly in the offing beyond the ships the focus of the Concave side of the Mount was above the town

~~2309.~~ In the Torrid zone
thunder is heard every night
but always at a
distance and near
the horizon — It
is probable that the
wreck of the ship
Dunbarge the Elec.
near them scudded
into the earth —

x
2310. The common
appearance of the sea
cannot be owing to
annular, the Globules
of light are generated

N. Norton

N. Norton

By the pressure of the Water
on the Ship, they are
thrown into the water
where they frequently
do not creep, such to
a considerable Distance
behind the Ship - This
evening Nov. 1792

in Lat Long
one very large ball passed
at some Distance from
the Ship. Perhaps the
number of which there
are great quantities in
these seas, may have this

Common power and reso-
sion the large balls of
snow of which appeared
this winter —

Exp. 11. The Crapes in the
balcony all lead off
whether is it to the air
or to the light?

Exp. 12. What winds of sand
are observed on the
Coast of Africa similar
to ~~that~~ the water
sprouts at sea —
much larger and bet-
ter defined —

W. Phillips

X

~~27th~~ Capt. M. Smith's
 water spouts cannot
 be dangerous, and says
 he would not hesitate
 to step his ship into
 one

Narsachi

X
~~27th~~ If there is an error
 in the observed distance
 of the Sun and Moon or
 Moon and Star, and
 the calculation is
 made for that erroneous
 distance with the addition
 or subtraction of that error
 at the conclusion gives
 the true distance? —

Astronomy

Whonony

~~285~~ to find what error
in line way is made
in the assumed Lat: will pro-
ceed in calculating the time
As the Tangent of \odot 's Azimuth
from the East or West is to the
Co-sine of the Lat assumed, so
is the mistake in Lat assumed
to the error in the time arising
from that mistake —

~~286~~ Ships of oakenside
different bottoms such as
the Lion and Windsorian
sometimes sail nearly
alike — The principal
cause of unequal sailing
must be the form of the
Ship —

Navigation

X
2317. The variation of the
sun in altitude can ex-
ceed the more than 15' in
1 minute of time.

Navigat
~~2318.~~ Is the resistance on
a cone the same when
drawn through the water
by its apex as by its
base?

W. M. M.
~~2319.~~ It is asserted that
the shark receives food
always into its stomach
which they extract
from Dungen, & after remain-
ing some time they make
their visit again!

In support of the above
fact it is said that a living
animal will not digest and
that the fish can exist on
very little air -

~~25th~~ It is affirmed that
a snake swallowed a re-
gular leg which remained
in its mouth for some time
before the snake could be killed
The leg had begun to be
digested - This seems to con-
flict the fact alleged in
the former article -

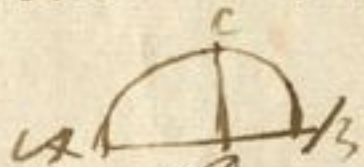
~~26th~~ I see among the
problems from which was
a term applicable to
problems which were

This will answer

M. 26th

undelium in - E. S.

Given a straight line
AB, to require to find
a point from which a
line drawn perpendicular
to AB shall be a mean
proportional to the segms



The locus of the point
is the semicircle

X
2322 Mathematical
Subjects —
Loci — Exhaustions —
Indivisibles — Methods
of infinites — Infinite series
— Maxima and Minima —
Logarithmic Curves —
16 Prop 3 ^o Sect 3 ^o Sect 4 —
Flexions — Cubic Equat.
Construction of Equations
Possim —

~~2323~~ The Diamond is
colorless - The Ruby
red - Yellow - Emerald Green
Amethyst or Violet -
Topaz yellow - Sapphire
Blue

A. Nelson

~~2322~~ In what manner can
the traces of a black
lead pencil be found on
paper? —

~~2325~~ What is called pe-
terised wood is not more
more than an accumu-
lation of Detruscable earths
the moulds formed by
putrefied vegetables. As
the fibres of the vegetable
decay a quantity of green-
stone earth is deposited by
the water, in the spaces
which they occupied; and
Quartz Stone is thus formed
of the very figure and texture

W. P. A. 1797

of the ready vegetable
body, but not a particle
of that body enters into
its composition —

W. G. M. W.
~~2996~~ In the preparation of
it is observed that vegeta-
ble matters become at-
most always glutinous,
animal substances at-
most always calcareous
— There is seldom any
attenuation —

W. G. M. W.
~~2997~~ In the process of pe-
riodization no conversion
takes place —

~~2230~~ This Day Thursday

6 P.M. The Lion sailed
D~~th~~ The last gun
produced a beautiful
cure of smoke which
whirled on its axis
a cone in the center
with its apex first
in front afterwards
behind — It is made
by greasing the muzzle
of the piece —

~~2231~~ At a wedding in
the highlands it is
customary to discharge
shots by way of merriment

the month - The mercury
is well to measure the same
2200. In English we are
of war always demands
the same number of
Linn with those with
which the salutes -

~~2200~~ M. Falcon bridge
always found in his
group of meeting with
and that when the acid
in concentration became
perfectly clear the specu-
the gravity was 10.7 which
is the ~~the~~ standard of the
acid of commerce in General.

N. T. Perkins

Manufacturer

25
26
27
28
29
30

25 37
39

24, 54

2242 The greatest part
of the amber imported
into England is found
on the shores of the Balt-
ic — gum, which Sir
Theophrastus saw the
amber which he found
to be electrical.

x
2243. In the East India
ships the sailors are
allowed 2 their wages
in slops —

2244. Newland rope
and Cables are the
Salsad which grows

most readily at sea
The process is this —
The seed is sown on a
single piece of flannel
spread over the bottom
of a flat box about 1½
Inch deep and
The sown flannel not
removed — The seed is watered
twice a day — in 5 or
6 days it is a luxuriant
sodded the stalks about
three inches in length, the
roots interwoven in a curious
manner below the flannel
— Crops them the best

in this way, was then
found on this salted thro'
the lower zone —
I am not sure with
answer best for this
experiment. — What
degree of heat is the best
the best was in general
from 70 to 80 —

~~22nd~~ 5th Thur Day Sat: Friday
7th Dec. I am informed
by Dublin Letter that
the specimens of Veger-
tables prepared by Mr
Gonardson were totally
spoiled - The Peas and Turn-
eps very bad - The car-
rots not quite so bad
- They were kept dry the
paper in which they
were wrapped quite dry -
The peas and Turneps
had fermented -

Which

~~29th~~. My person may
pay for Diamonds upon
paying one fifth to the
queen of Portugal
— Brazil

~~29th~~. The Tides rise in
the Harbour only to
four feet —

~~29th~~. Voyage from Lisbon
to Brazil has been
performed in 33 Days
common 50 Days —

~~29th~~. To sail into the
Harbour of Rio Janeiro
after passing Cape Frio

Miscell

St. Paul

Navigation

Navigation

Then S. W. about 12
Leagues, the sea breeze
will then carry you into
the harbor —

~~1750~~ Strangers cannot
purchase articles in Bra-
zil —

~~1751~~ The Portuguese keep
always one man of war
and some frigates cruising
off the coast, to keep in
the Algarves, which English
purchase this with a
great deal of money —

Shete - penance
Wits - boots - gloves -
- stationery - In a pair
books - which you
find - Trimbles -
Decanter - Jarret - some
for ink -

[Faint handwritten text, possibly a list or notes]

[Faint handwritten text, possibly a list or notes]

[Faint handwritten text, possibly a list or notes]

[Faint handwritten text, possibly a list or notes]

4 p... 12 by

London

4 p...

1 p...

2 ...

1 ...

work...

...

...

Bretton
Madras
Dacca

The weatherboarding will be of poplar, 3-4 inch thick by not over 7 inches wide, plained on the outside, well nailed at each piece of studding, and lapping at least 1 inch.—

Shingles, if 18 inches long, may be laid 5 inches to the weather.

All the timber must be of good sound quality, free from shakes, sap, or other defects, and must be cut during the winter months.

The ends will be finished in a neat manner, according to such design as may be approved of by the Engineer.

The sides and ends of the bridge will be covered with three coats of white paint, of good quality.

RAISING.—After the scaffolding is prepared and the sills are placed on the abutments, the chords will be laid upon them and fastened to the posts. There will be given to the chords a spring or crowning upwards of inches at the centre. Great care will be observed that the chords are in a true straight line, and that the different lines of chords are in the same horizontal plane. The floor beams will then be placed, and the caps fitted and pinned to the heads of the posts. The tenon of the post should fit the mortice so tightly as to require driving with a maul. The truss braces will then be inserted and spiked to the posts. Each truss will then be brought to a true ver-

