How to grave and Inlay Colours into Gold Silver Iren or Copper to Shew like Ammel

First cover your Metttal with a Crust of warm wax and when it is Cold with a fine Sharp bodkin Draw or Cut out the Shape of or proportion of, what you please either letters Flowers Borders or Scutchions of a Resonable largeness then pour upon the

Same empty places which you have engravened upon the wax Some few Drops of Strong water or Aqua fortis and lett them lye a while and when you find them Deep enough grauen Orpiment and Mastick melted together for a Yellow coulour and vermilion and Mastick for a Red and Bice and mastick for a Blew and Ceruse for white and Ivory burnt for a Black Now when Your Mastick hath been melted with any of the afore Said colours lett it coole amd then beat the same into powder and lay the Same powder within the grauing
and after lay the Mettel upon a Small Charcoale fire till the Mastick be Melted and it will Remane fast and firm therein a long time

How to harden the white of Eggs into an Artifical Gum fit for Many uses

Separate the whites of Eggs clean from the Yolks and Beat the whites very well into a clear oyle or water and when it is settled Skim of the froth then put the Same into Bladders and hang them in a Chimney corner where fire is usulely kept to dry and in a few days the Same will become as hard as Gum Arabick in hot weather you may hang Your Bladder in the Sun to dry this Gum may be used instead of other Gums and with it You may Varnish Prints or Other things that are washed in Colours -

How to Make Appels pears and other frutes of several colours and to give them a Dainty taste of Spices the other Side.

If you will have a pleasant Colour to your frute do thus for a Red boyle Brasil, Turne Soyle or Sanders and for a Yellow use Saffaron or Turmerack Now to give them a Dainty Taste and Smell You Must beat Cloves Mace Cinamon and Nutmegs to powder and Mix them with the water of
your Colours with Some
Honey then with an
Tanger bore a hole in the
Biggest part of the Tree

Unto the Middle Some thing
Sloping downwards and then
pour your water and Spices
into the hole then with a pin
Maid of the Same wood or tree
beat it hard into the hole, and
Saw of the End and wax it about
this Must be Done in Winter
Before the Spring because
when the Sap riseth the Colour
Sents and lasts allso.
ascendeth with the Same

How to Make Mutton Blood
Red

Take Some of the Clearest
Blood of Sheep and put it
into a Bladder and with a
Needle prick holes in the Bottom
of it, than hang it up in the
to Dry in the Sun this
Saith a painter that told
me for a Specall Experiment
will make a Transparent and
Excellent Blood red Colour
which you may alalso dissolve
in Your Alum water
According as you have need
thereof

How to make Alum water

Take a Quart of water and
Boil it in a Quarter of a pound
of Allum Seeth until it be
Molten and let it then Stand
a day and it will be fit for use

Admit the. Semidiameter of the
Earth to be 3436 miles &
that there is a Mountain
one Mile in heighth I demand
how far Such a Mountain may be Seen at Sea or Land
Look on to the Other Side for the answer

Add the Semidiameter of the Earth and the Mountain together, soe it 3437
whose Square is 11812969 from which Subtract the Square of the Semidiameter of the Earth viz 11806096 there Remains 6873 whose Root is 82 and three fourths Whereof you may Conclude that the Mountain May be Seen all Most 83 Miles

Of the accusation of a Theif

A Theif breaking into an Orchard Stole a Certain number of Pears and at is coming forth he met with 3 men one after another who threatened to accuse him of theft and for to appease them he gave unto the first man half the pears that he Stole who Returned him back 12 of them. then he gave to the Second half of them he had Remaining who Returned him back 7. and unto the third man he gave half the Residue who Returned him back 4 and in the End he had Still remaining 20 pears. Now to do I demand how many pears he Stole in all to answer this Queston you must worke backward the Rest is over Leafe

for if you take for if you take 4 from 20 there will Remain 16 which being Doubled make 32 from which abate 7 and there will Remain 25 which being Doubled makes 50 from which Subtract 12 and there
will remain 38 which again
Doubled make 76 the true Number
of pears that he gathered

Of three Sisters

A Certain man haveing 3
Daughters to the Eldest he gave
22 Apples to the Second he gave
16 apples to the third he gave
10 apples

and Sent them to the Market
to Sell them and gave them
Command to Sell one as many
for a penney as the Other Namly
7 a peny and every one to
bring him home so much money
as the Other and Neither change
apples nor Money one with
another How Could that be
This to some may seem
Impossible but to the
Arithmeticians very Easy
for whereas the eldest had 3
peniworths and one Aple over
the Second 2 peniworths and
tow Aplels Over and the Yongest
had 1 peneyworth and three
Appels over

So that the Yongest had So
Many Single Apples and one
peneyworth as the Eldest had
penyworths and one aple over
and Consequently the Second
proportional to them both
They maid their Markits
thus: A Steward coming to
by frute for his Lady bought
all the apples that they had at
7 a peny leaving the Odde
Ones behind him then had
the Eldest Sister 3\textsuperscript{d} and one
aple the Midle Sister 2\textsuperscript{d} and
tow apples and the Yongest

one peny and 3 apples the
Steward bringing the frute to his
Lady She liked them so well that She sent him for the rest. She notwithstand
ing few remaining she sent him for them and bid him bring them at any rate the steward
coming to the market again could not by the odd apples under a penny a piece then had the youngest sister
3d peneworth the middle sister 2 penny= worth and the eldest one peneworth
and so they all had 4d piece and yet sold as many for a penny one as another
and neither changed apples nor money one with another as they were comanded
UDP

Of one that bought and sold both at a rate and yet in the end proved a looser

A man bought a 100 of eggs at three a penny having 120 to the hundred also he bought 100 more at two a penny having likewise 120 to his hundred these eggs being mingled he sold them again for 5 two pence and 120 to the hundred as he bought them the question is whether he gained loss by that bargain

If you work by the rule of three direct you shall find that his 120 eggs at 3 for a penny came to 3d = 4d and his 120 at 2 for a penny came to 5d which being added make 8d = 4d then again to see what they came to at 5 for 2 pence worke likewise by the rule of 3 direct and you shall find that 240 at 5 for 2 pence comes but to 8d whereby
the Seller looseth 4d of the Money
They Cost him

To find what is hidden in tow hands

Supose that a man hold divers things in his hands as Gold and Silver and in one hand he holdeth the Gold and in the other Silver know now to know which hand the Gold is in & which the Silver is in appoint for the Gold 4 Shillings and for the Silver 3 Shillings or any other prices so one be odde and the other Even then bid him triple that which is in the right hand and Double that which is in the left hand then bid him adde these tow products together and ask him if it even or Odde if it be even then the Gold is in the right hand if odde the Gold is in the left

How to take the Altitude by a bole of water

Place on the ground a Bole of water which done erect your Body Strait up and go back in aright line from the bulding till you espy in the Center or midle of the water the very top of the Altitude which Done observe the place of your Standing and Measure the height of your Eye from the Ground

Together with the Distance from your Standing to the water and the Distance of the water to the Base or foot of the Altitude which being all Exactly taken will help you to the Altitude
acquired by the Rule of
proportion

Example

Let the Altitude required be
A B the Bole of water placed
at C on the Ground at C then
go Backwards from C your
Body Erected as Strait as
may be till till your

[ Diagram of a rectangle depicting positions A, B, C, D, E & the numbers 80 & 6. ]

Eye at C Spye the top of the
Altitude A B in the water
which found Observe the place
of your standing at D and
Measure the Altitude of your
Eye to the Ground which is 5
5 foot then Measure the
Distant from D to C which is 6
foot and likewise the Distant
from C=to B which is 80 foot

These three Distances
had, worke by the Rule of
proportion thus

as the distance C D is to the
Altitude E D So is the Distance
C B to the Altitude AB
which is 6 foot and 8 Inches

The Use of the Sliding Rule

The Upper Most line of
Numbers on the Sliding peice is
contiguous to an Equal line of
Numbers on the upper part of the
leg of the Rule by the help of
these tow the Content of any
piece of plank may be found
thus

The length being taken in
Feet and the Decimal parts of a
foot and the Bredth in Inches and
Decimal parts; then Slide the.
Slider backwards or forward, till
12 on the upper line Stands against
the length on the line of Numbers
on the Slider then keeping the
Slider fixed and looking for the
Bredth in Inches on the upper
line, right against it on the
Slider you have the Content
of the planck in feet and
Decimals of a foot
Example Supose a plank

take a Sheet of Venice
Paper or Else of the
finest white paper that
You can Gett wett it all
over with Clean Sallet
oil then wipe the. oil of
from the paper as clean as
You can So that the paper
may be dry otherwise it
will Spoil a printed
Picture having this
don prepared your
Paper lay it upon any
Painted or printed picture
and you Shall see the
Picture thro' the same more
Perfectly appearing than
tho glass and so with all
a black lead pen you may
Draw it over with Ease
and better first with a
Soft Charcole and then
with a pen after that you
have thus drawn the picture
upon the Oiled paper put it
upon a Sheet of white
paper and with a little
pointed or a feather taken
out of a Swallow's Wing
Drawe over the picture Y
again and So You Shall
have the Same very prettily and neatly Drawn
upon the white paper which
You may Sett out with
Colours as Shall be
taught hereafter