

HOFFMAN'S

Book of Mystery.

BEING A
PRACTICAL GUIDE TO CONJURING WITH CARDS,
SLEIGHT-OF-HAND, &c.,
MAGIC WRITING, SECRET WRITING,
CHEMICAL MAGIC,
&c., &c.

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INTRODUCTION.

IN a book which is intended to be a practical guide to Conjuring, the following few words, by way of introduction, may not be out of place. Until recently, books on this ancient art were exceedingly scarce, such was the vigilance with which its followers endeavoured to guard their secrets. Lately, however, a reaction has taken place, Conjuring literature being now as varied as it is practically useless. One or two exceptions to this rule have appeared, in the shape of a few really standard works ; but such a high price has been invariably set upon them as to place them above the means of many who would otherwise desire to become proficient in this popular art. In the following pages I have endeavoured to place before the public a book which, from its cheapness and practicability, will commend itself to all.

In conclusion, I would urge upon all those who wish to acquire proficiency in the art that, as in all other studies, perseverance is the only sure guide to success.

HOFFMAN.



UNDER ROYAL PATRONAGE.

FIRST TOUR IN IRELAND,

Under the personal direction and management of

MR. M. RUSSELL ROSSE,

OF

→ PROFESSOR :: HOFFMAN ←

The Greatest Wonder Worker of the Age,

And well-known authority on

Modern Magic.

HERR HOFFMAN *had the honor of appearing before*

HER MOST GRACIOUS MAJESTY THE QUEEN,

By Command, at

WINDSOR CASTLE, DECEMBER 30th, 1877,

And has also appeared before the most of the Nobility, Clergy, and
Gentry of this Country, among whom may be mentioned :

EARL BROWNLOW
EARL SOMERS
LORD LONDONDERRY
ARCHDEACON THICKNESS
DEAN WELLESLEY

&c., &c.

Arrangements have been made to visit all the principal Towns in
Ireland, commencing at the

THEATRE ROYAL, BELFAST, JUNE 28th, 1880.



CONJURING.

THAT there has been "Jugglery" in all ages of the world the pages of history abundantly prove. The ancient religions of the heathen were mixed up with an extensive system of legerdemain, and were, more or less, tissues of trickery. Sleight-of-hand, tricks of the tongue by which the word was kept to the ear, but broken to the hope, and various miraculous deceptions, were the means by which the priests of Egypt, Greece, and Rome used to subjugate mankind. Happy ought we to be, thus living in an age when humbug of every kind is sure to meet exposure by the daylight beams of truth.

The Eastern nations, from the earliest times, possessed, besides these religious jugglers, others who made a livelihood by going from place to place, and performing various tricks and feats by which the judgment was bewildered and the reason bamboozled; and even now the performers of the East infinitely exceed those of the West. In the Norman times the juggler was termed *Jongleur*, or *Joculator*, and united in one the minstrel, astrologer, and merry-andrew. In the fourteenth century he seems to have become more entirely a performer of tricks and feats, and bore the name of *Tregetour*. The *tregetours* were adepts at every kind of sleight-of-hand, and by the assistance of machinery of various kinds deceived the eyes of the spectators, and produced such illusions as were usually supposed to be the effect of enchantment, for which reason they were frequently ranked with sorcerers, magicians, and witches. Chaucer, who, no doubt, had frequently an opportunity of seeing the tricks exhibited

by the tregetours of his time, says :—"There I saw playenge jogelours, magyciens, trageteours, phetonysses, charmeresses, old witches, and sorceresses;" and the old poet goes on to say of them—"Sometimes they will bring on the similitude of a grim lion, or make flowers spring up as in a meadow; sometimes they cause a vine to flourish, bearing white and red grapes, or show a castle built with stone, and when they please, they cause the whole to disappear:" and in another part of his work he says :--

"There saw I Coll Tregetour,
Upon a table of sycamour,
Play an uncouth thyng to tell;
I saw hym cary a wyndemell,
Under a walnot shale."—HOUSE OF FAME, *book iii.*

The learned monarch, James I., was perfectly convinced that these and other inferior feats exhibited by the tregetours of his day, could only be performed by the agency of the "old gentleman," whom it is not very polite to name. The profession had already fallen very low; and at the close of the reign of Queen Elizabeth, the performers were ranked by the moral writers of that time, not only with ruffians, blasphemers, thieves, and vagabonds, but also with Jews, Turks, heretics, pagans, and sorcerers; and in more modern times, by way of derision, the juggler was called a mocus-pocus, or hocus-pocus—a term applicable to a pick-pocket or common cheat.

The following pages are not intended to make the reader either a cheat or a trickster; there is nothing, perhaps, so utterly contemptible in every-day life as trickery and deception, and I would caution the student not to obtain by these amusements a love of deception, which is only allowable in such feats of amusement, and which is in no way culpable, when every one knows he is deceived. But I would advise him very strongly to cultivate in his own mind the virtues of sincerity, straightforwardness, candour, openness, and truth; to shun subterfuge and deception as he would a venomous reptile; and to hate an untruth as he would hate that same old gentleman whom we have been too polite to mention, and who is the father of it.

With this sage advice, we shall give the following hints, which are of considerable importance to the amateur exhibitor :—

1. Never acquaint the company beforehand with the particulars of the feat you are about to perform, as it might give them time to discover your mode of operation.

2. Endeavour, as much as possible, to acquire various methods of performing the same feat, in order that if you should be likely to fail in one, or have reason to believe that your operations are suspected, you may be prepared with another.

3. Never yield to the request of anyone to repeat the same feat, as you would thereby hazard the detection of your mode of operation ; but do not absolutely refuse, as that might appear ungracious. Promise to perform it in a different way, and then exhibit another which somewhat resembles it. This manœuvre seldom fails to answer the purpose.

4. Never venture on a feat requiring manual dexterity till you have previously practised it so often as to acquire the necessary amount of expertness.

5. As diverting the attention of the company from too closely inspecting your manœuvres is a most important object, you should manage to talk to them during the whole course of your proceedings. It is a plan of vulgar operators to gabble unintelligible jargon, and attribute their feats to some extraordinary and mysterious influence. There are few persons at the present day credulous enough to believe such trash, even among the rustic and most ignorant ; but, as the youth of maturer years might inadvertently pursue this method, while exhibiting his skill before his younger companions, it may not be deemed superfluous for me to caution him against such a procedure. He may state, and truly, that everything he exhibits can be accounted for on rational principles, and is only in obedience to the unerring laws of Nature ; and although I have just cautioned him against enabling the company themselves to detect his operations,

there can be no objection (particularly when the party is composed of many younger than himself) to occasionally show by what simple means the most apparently marvellous feats are accomplished.





Part I.

TRICKS WITH CARDS.

ALTHOUGH proficiency in games with cards is, in my opinion, a most pernicious accomplishment for youth, and one which cannot be too severely reprobated, I do not consider sleight-of-hand tricks with a pack of cards at all objectionable, but rather a source of much harmless amusement; and, under this impression, I do not hesitate to insert the following series of excellent deceptions and sleight-of-hand tricks.

Playing cards are believed to have been invented in Spain, as early as the fourteenth century; for, in 1378, John the First, King of Castile, forbade card-playing in his dominions, in an edict which is anterior to any similar legislative measure in other parts of Europe. The figures upon the cards themselves add to the strength of the supposition; for the suites answering to those of spades and clubs have not the same inverted heart and trefoil shape which ours of the present day display, but espadas, or swords, and bastos, or cudgels, or clubs; so that in fact we retain their names, though we have altered the figures. At the present time, too, cards are a favourite diversion of the Spaniards, and the monopoly of selling them is vested in the hands of the Sovereign.

In the reign of Henry the Seventh, card-playing was a very fashionable court amusement in England. The cards then used differed materially in their figures from those now in vogue; as, instead of clubs, spades, diamonds, and hearts, they had rabbits, pinks, roses, and the flowers called columbines, upon them; as also bells, hearts, leaves, acorns, deer, etc. Let us now turn to the tricks that can be played with cards.

In accordance with my rule, I shall lay the principal stress on card-tricks that require no apparatus, and may be performed with ordinary cards.

TO MAKE THE PASS.

This is a necessary beginning for card-tricks. "Making the pass" is the technical term for shifting either the top or the bottom card to any place in the pack that you like. It is almost impossible to describe it, and I can only say that it will be learned better in five minutes from a friend than in as many hours from a book. As, however, a friend is not always to be found who can perform the pass, I will endeavour to describe it.

The cards are held in both hands, right hand underneath and left above. By a quick movement of the right hand, the bottom card is slipped away towards the left, and is placed upon the top card, under shadow of the left hand, which is raised for the moment to allow of its passage.

This movement must be assiduously practised before it is exhibited in public, as nothing looks more awkward than to see it clumsily performed, in which case two or three cards generally tumble on the floor.

TO TELL A CARD BY ITS BACK.

While shuffling the pack, cast a glance at the bottom card, make the pass, and bring it to the top. Continue to shuffle, and lay upon it by degrees as many cards as you like—say six. Then lay the pack on the table, face downwards, and divide it into seven heaps, beginning at the bottom, and leave the seventh heap larger than any of the others.

When you have done this, take one card from the top of the seventh heap, appear to calculate, and lay it, face upwards, on one of the other heaps. Do so with five cards, thus leaving your slipped card at the top of the seventh heap. You will then announce that by the aid of the six cards you will name the seventh. You name it accordingly, after carefully studying the other cards; and on asking a spectator to take it up, it will be seen that you are right.

If you place five cards above the slipped card, you will lay out six heaps; and if eight cards, there will, of course, be nine heaps.

THE CARD NAMED WITHOUT BEING SEEN.

As in the last trick, cast a glance at the bottom card—say the ace of spades. Lay out the pack in as many heaps as you like, noting where that one is laid which contains the bottom card. Ask anyone to take up the top card of any heap, look at it, and replace it. You then gather up the heaps apparently by chance, but you take care to put the heap containing the bottom card upon the card which has been chosen. You then give anyone the cards to cut, and on counting them over, the card that immediately follows the ace of spades is the card chosen. If by any accident the two cards should be separated when cut, the upper card of the pack is the chosen one, and can be picked out with seeming care.

THE CARD IN THE EGG.

To perform this feat, provide a round hollow stick, about ten inches long and three quarters of an inch in diameter, the hollow being three-eighths of an inch in diameter; also have another round stick to fit this hollow, and slide it in easily, with a knob to prevent its coming through. My young readers will understand my meaning when I say that in all respects it must resemble a popgun, with the single exception that the stick which fits the tube must be of the full length of the tube, exclusive of the knob.

Next steep a card in water for a quarter of an hour, peel off the face of it, and double it twice across, until it becomes one-fourth the length of a card; then roll it up tightly, and force it up into the tube until it becomes even with the bottom. You then thrust in the stick at the other end of the tube until it just touches the card.

Having thus provided your magic wand, let it lie on the table until you have occasion to make use of it, but be careful not to allow any person to handle it.

Now take a pack of cards, and let any person draw one, but be sure to let it be a similar card to the one which you have in the hollow stick. This must be done by forcing. The person who has chosen it will put it into the pack again, and, while you are shuffling, you let it fall into your lap. Then, calling for some eggs, desire the person who drew the card, or any other person in the company, to choose any one of the eggs. When he has done so, ask if there be anything in it?—he will answer there is not. Place the egg in a saucer, break it with the wand, and pressing the knob with the palm of your right hand, the card will be driven into the egg. Then show it to the spectators.

A great improvement may be made in this feat by presenting the person who draws the card with a saucer and a pair of forceps, and instead of his returning the card to the pack desire him to take it by the corner with the forceps and burn it, but to take care and preserve the ashes; for this purpose you present him with a piece of paper (prepared as hereafter described), which he lights at the candle; but a few seconds after, and before he can set the card on fire, it will suddenly divide in the middle, and spring back, burning his fingers if he do not drop it quickly. Have another paper ready, and desire him to try that, when he will most likely beg to be excused, and will prefer lighting it with the candle. When the card is consumed, say that you do not wish to fix on any particular person in the company to choose an egg, lest it might be suspected he was a confederate, therefore request any two ladies in the company to choose each an egg, and having done so, to decide between themselves which shall contain the card; when this is done, take a second saucer, and in it receive the rejected egg, break it with your wand, and show the rejected egg round to the company—at the same time drawing their attention to the fact of those two eggs having been chosen from a number of others, and of its not being possible for you to have told which of them would be the chosen one. You now receive the chosen egg in the saucer containing the ashes, and having rolled it about till you have blacked it a little, blow the ashes from around it into the grate; you then break the egg with the same

wand, when, on touching the spring, the card will be found in the egg.

The method of preparing the paper mentioned in the above feat is as follows:—Take a piece of letter paper about six inches in length, and three quarters of an inch in breadth, fold it longitudinally, and with a knife cut it in the crease about five inches down; then take one of the sides which are still connected at the bottom, and with the back of the knife under it, and the thumb of the right hand over it, curl it outwards as a boy would do the tassels of his kite; repeat the same process with the other side, and lay them by for use. When about using them (but not till then, as the papers would soon lose their curl if stretched), draw them up so as to make them their original length, and turn the ends over a little, in order that they may remain so; when set on fire, they will burn for a minute or two until the turn-over is burnt out, when the lighted ends will turn over quickly, burning the fingers of the holder. This part of the trick never fails to excite the greatest merriment.

THE MAGICAL CARDS.

For this experiment you must get two packs of cards, select the four of spades and the five of hearts from each pack, take and gum the four of spades to the five of hearts, do the same to the other two. Now put them on the top of a pack of cards and show the audience the five of hearts, lay it on your table; then show them the four of spades, lay that one on a chair; borrow two large pocket handkerchiefs, place each handkerchief over each of the cards, but remember as you do so that you turn the cards over, that is to say, it appears to be the five of hearts; when you turn it, it will be the four of spades. Then tell your audience that they saw you put the five of hearts on the table and the four of spades on the chair. You have but to say "Presto, change places," when the four of spades will be found upon the table and the five of hearts on the chair. Take off the pocket handkerchiefs and show the audience the cards.

THE MYSTERY OF MYSTERIES.

Commence your illusion by giving one of your audience a pack of cards; bid him take them round to some of the

others, and let them shuffle them well. When they have done so, request them to bring the pack of cards to you. While he is doing the above, walk behind your table and pick up a small hook attached to a piece of black thread. The other end your confederate must hold behind your curtain. Place the hook in the tail of your coat, and walk to the front of your table. When the person gives you the cards, request him to blindfold you so you cannot see them; then let him be seated. Commence your illusion by turning and feeling every card, and when you come to the court cards your confederate will pull the thread, this being the signal for a "picture card." You will, much to the astonishment of your audience, pick out all the court cards blindfolded.

THE CABALISTIC CARD.

This is an illusion that cannot help astonishing your audience, if performed with skill, and a little practice will soon enable the young amateur to accomplish this experiment. In the first place, you must have a piece of the same colour curtain as you have on the stage, about 8 inches long and 6 inches wide. Select from a pack of cards, say the ace of hearts, and pin it upon your curtain; then place the little piece of cloth over it with two small pins—(the curtain being the same colour as the piece of cloth it cannot be seen)—also have attached to the little piece three or four yards of black thread, and let it hang down behind your table, ready for your confederate to pull. Commence your illusion by wishing some person to take a card (always choose a lady), and mind you force the same kind of card as pinned upon the curtain. When she has done so, burn the card and load your pistol; but be sure you always put a small piece of paper on the top of the powder, before putting in the ashes of the card, or perhaps the ashes, being hot, may set fire to the powder, and thus cause a very great accident. Then ask the lady if she would know her card again, when she will reply "Yes." Hold up your pistol, and at the word "three" fire towards the curtain. Your confederate will pull the thread, the piece of cloth will fall behind your table, and the card will appear on the curtain.

THE TEN MAGIC CARDS.

From two packs of cards take out the whole suite of "clubs," which is ten in number. Place one of your set of cards behind your curtains, and lay them out in a row, in such a manner that you can cast your eye over them quickly. Take the other set with the right hand; then commence by asking some person to take a card, and let him keep it. Hand the remaining nine cards to your confederate, who will at once look over them, and see the card that has been taken (suppose it to be the two of clubs). He will then take the same card from the other set, and put it on the top of one of the packs (that have no clubs among them), and will place the pack behind your table. During the time your confederate is preparing the above, return to the person who has taken the card, and say, "Oh, by-the-bye, I forgot to ask you to write a word on the back of the card, that you may know it again." While he is doing this, walk behind your table, and pick up the other pack of cards, then return to the person, asking him to place the card in the pack, you only giving him part of a pack—keeping the other part with the second card in your hand. When he returns them to you, pretend to shuffle them well, but, in so doing, be sure you do not get the two cards together, or you will not be able to see the pencil mark, and may give the wrong card; now, cut the pack, and produce the second card, saying, "Ah! ladies and gentlemen, perhaps you may be surprised, but I have not yet concluded my experiment;" then place the pack of cards on your table, burning the (supposed) card in the flame of a candle. Load your pistol with a little powder; then put in a small piece of paper—by this time the ashes of the burnt card will be cold, which also place in your pistol; fire at the pack of cards on the table, saying, "Appear in the pack of cards;" then invite the person who had taken it to walk up to your table, and request him to look for his card amongst the pack, when he will produce the right card that he marked with the pencil. This illusion requires practice like all the other experiments; but it depends chiefly upon your confederate giving you the right card that is chosen.

TO NAME ALL THE CARDS OF THE PACK IN SUCCESSION.

This trick is done by a formula, which it will be necessary for the conjuror to remember. There are several ways of performing it; but as a formula is necessary in each way, we give the following as the simplest and best:—

“Eight kings threatened to save
Ninety-five ladies for one sick knave.”

Any person can plainly see that the order of the cards is suggested in this little couplet. The order, then, is: eight, king, three, ten, two, seven, nine, five, queen, four, ace, six, knave. Before proceeding to perform the trick it will be necessary to have the suites in an order, red and black alternately—say, diamonds, clubs, hearts, spades. It will be convenient, also, to sort out the cards into the four suites, and then you arrange them in the following manner:—In your left hand take the eight of diamonds, *face upwards*; on this place the king of clubs; on this place the three of hearts; then the ten of spades, and so on until you have exhausted the cards. Of course you must have the cards arranged privately beforehand, and, if possible, make this your first trick. (The best way, however, to remove suspicion about the order is to have a separate pack arranged in the order for the trick, and at a suitable opportunity exchange your common pack for your arranged pack.) The cards may be cut any number of times, after which you spread the cards, and ask any person to draw one. Be sure and take a glance, while he is looking at his card, at the next card above that which he has drawn. Now we will suppose that the card above is the five of diamonds. You know that in the formula “five” is followed by the word “ladies,” which means “queen;” and since, by the order of the suites, clubs follow diamonds, you know at once that the card drawn was the queen of clubs. Name the card, and ask the drawer to replace it. Now ask some other person to cut the cards, and perform the trick again in the same manner as before, taking care, however, this time to pass all the cards, which were above the drawn card, below the remainder of the pack. Of course this is the same as cutting the pack at that particular card. After

naming the card, ask if any person would like the rest of the cards to be named. You can then name the rest, showing them to the company, one by one, to show you are correct. It only needs a little practice to name all the cards in this way.

THE CARDS BEING CUT, TO TELL WHETHER THE NUMBER CUT IS ODD OR EVEN.

In this trick you use the arranged pack you used in the last trick. See whether the bottom card of the pack is black or red, and ask some person to cut the cards, announcing to them that you will, by the weight of top half of the cut, tell whether the number of cards in that half is odd or even. After the cards have been cut, take up the upper half, and poising it on your hand, as if to feel its weight, glance at the bottom card. If that card is of the same colour as the one at the bottom of the whole pack, the cards cut are of an even number ; if of a different colour, they are odd.

THE WHIST TRICK.

Arrange the cards as in the two preceding tricks, and ask any of the audience to play a hand at whist with you. Do not shuffle the cards, but cut them as usual. Be careful to deal the cards yourself, as of course you will get the last, or turn-up card. Each person will find on looking at their cards that they have got them all of one suit, but since you have the turn-up card, or trump, all your cards will consequently be trumps. By this means you can, of course, win every trick.

THE PAIRS RE-PAIRED.

Deal out any twenty cards from a pack, taking care, however, to place them with their faces upwards, and in couples. Ask any person to note a couple, and collect the twenty cards again. Be sure in collecting that neither of the cards of a couple gets separated. Deal the cards again, face upwards, according to the following formula :

"Mutus dedit nomen cocis."

Now, there are really only ten letters in this sentence, every letter being repeated. From this you arrange the cards in the following order :

M	U	T	U	S
1	2	3	2	4
D	E	D	I	T
5	6	5	7	3
N	O	M	E	N
8	9	1	6	8
C	O	C	I	S
10	9	10	7	4

Deal your first card with its face upwards upon the imaginary "M" in *mutus*, and the second card on the other imaginary "M," which you will find in the middle of *nomen*. Then place a card on the first "U," the next card on the other "U," then with "T" the same way, and so on until you have placed all the cards in their places in the four rows. Now ask each person in which row his two cards now appear, and you will at once know what the cards are. For instance, if a person says his cards are in the second and fourth rows, you know at once that the two cards must represent the letter "I," since "I" is the only letter the same in both. If a person says that both his cards are in the first row, you at once know that they are the cards representing the two "U's," and in the same manner with any other of the cards.

A ROW OF CARDS BEING PLACED FACE DOWNWARDS ON THE TABLE, TO INDICATE BY TURNING UP ONE OF THEM HOW MANY HAVE BEEN TRANSFERRED DURING YOUR ABSENCE FROM ONE END OF THE ROW TO THE OTHER.

Deal from the top of the pack a row of fifteen cards, face downwards. Have the first ten of these arranged beforehand in the following order:—First, the ten; then nine, and so on, down to the ace, which is inclusive. It makes no matter what suites you take. If you have not a blank card, put a knave for the eleventh. This card will stand for o. When

you have dealt the cards, their arrangement will therefore be as follows:—10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0, *, *, *, *, —.

The four asterisks represent any other four cards. The audience, of course, know nothing about this previous arrangement. You now leave the room; but before going, you invite the audience during your absence to remove any number of the cards (not exceeding ten) from the right hand of the row, and place them, in the same order, at the other end of the row. On your return you have only to turn up the eleventh card from the left end of the row, and that card will show you how many cards have been moved. An example will clearly prove this. Suppose the audience had only removed two cards, as the following:—*, *, 10, 9, 8, 7, 6, 5, 4, 3 [2], 1, 0, *, *. The eleventh card from the left-hand side is "2," which shows you the two cards only were moved. If no card is moved, the "0" will remain the eleventh card, as it was at first. Do not, if you can possibly avoid it, let the audience see you counting the cards.

DECEPTIONS WITH CARDS.

Just a few words on this matter. Never, on any account, bet with a professional gambler; he is sure to have the best of you. The following little episode transpired a few years ago at a Newmarket meeting, where a rascal was fairly skinning his victims alive at the simple game known as "Turning up Jacks," three-card monte, or *birlibibi*, as the country may be. Happening to pass at the time, I turned back to look at the childish simplicity of the victims. The gambler soon noticed me, and thinking me a likely prey, sang out—"Wouldn't you like to lay a wager on, my noble captain? This is the real sport for gentlemen's sons." "I'll risk half-a-crown," I answered, smiling in my sleeve.

I did not even look on as he shuffled the three cards about, the trick being simply to make the spectator think that he still sees the chosen card, while really another is the aim of their eyes. When he was done shuffling I lifted up the supposed card, but, of course, found it a different one.

"To be sure you've done me," said I, with a soft air, "for you juggled the real one away altogether."

"Juggled, Sir !" replied the blackleg, "why, here it is."

He held it up, but I pretended not to believe it, until I handled it. In so doing, I marked it delicately with my thumb-nail, and dropped it on the table. The sign was imperceptible to anyone but a practised hand, hence the gambler worked the cards as merrily as he pleased, before laying them out ; but, to his amazement, I pitched upon the right card every time. The trickster would have cut and run, but the crowd, being mostly losers by him, swarmed round delightedly, and kept us at the game until his paltry bank was broken.

"I don't want to rob you, my fine fellow," said I, handing him back his money, "but just remember that however cunning a thief may be, some day he will meet more than his match."

And away I went, leaving the laughing, but wiser crowd, to mob the swindler off the course.





Part II.

MODERN AND MYSTERIOUS MAGIC, BY SLEIGHT OF HAND, &c.

THE SHOWER OF SWEETS.

To perform a clever trick with dexterity before a "small party" is at once to become the hero of the evening. If you cannot sing you must solve conundrums, or dance a horn-pipe; if neither of these be "*your forte*," a good trick or two will give equal pleasure to the "bright blue eyes" peering at you. The sweet trick is exhibited thus:—The professor hands the audience a dessert plate and a cambric handkerchief for examination; these being returned, he places the plate upon a table near to him; the handkerchief is then spread out quite flat over the plate. At command, sugared almonds, sweets, and comfits pour into the dessert plate the instant the handkerchief is lifted up—producing an effect that would have astonished the Maji of old. The way in which it is done is this: Make a calico bag large enough to hold the quantity of sweetmeats that you intend to distribute, exactly to the pattern of a night-cap, or letter A (a small selvage is turned up at the bottom of the bag); procure two pieces of watch-spring, and bend them quite flat—each spring to be exactly half the diameter of the bag. These are put into the selvage, and sewn up firm. When the bag is opened it will close itself, in consequence of the springs. A long pin is passed through the top of the bag, and bent round hook

shape. If the bag be now filled with sweets, &c., it may be suspended by the hook without any danger of the sweets or anything else falling out, because, although the mouth of the bag is downwards, the springs keep it shut. When this trick is to be shown, the prepared bag is hung on the side of the table that is away from the audience ; the plate is also placed on that side, and when the handkerchief is laid over the plate, a portion is left to fall over the side of the table. Now the handkerchief is picked up with the right hand, in the centre (just as a lady does when she wishes to exhibit the lace edge), and with it the bag of sweets ; the folds of the cambric hide the bag. The left hand is now used to draw over the handkerchief, and to press the bag ; this causes the springs to open, and out fall the "good things" upon the plate. This causes sufficient diversion for the merest tyro of a conjuror to drop the bag behind the table unseen, while he advances to the audience, politely inquiring, "Will you take a few sweets?"

THE ENCHANTED FISH AND BOWL.

This is a most beautiful illusion, and great care should always be taken by the amateur while he is performing it. In the first place, get a tinman to make you a spoon with the handle hollow throughout, but pierced at the top ; have a little hole in the handle close to the bowl, and a little hole at the top of the handle. You fill this with real black ink ; keep the top hole covered over to prevent air getting to the ink ; by so doing the ink will not run out at the other end. You must also buy a glass globe that has a foot to it ; get a friend to line the globe with black silk ; when completed, damp the silk with water, and it will stick fast to the glass. The silk must also have a hole at the end ; fill up the globe with water, and place in it two live fish (gold or silver) ; place this upon your table alongside of your spoon. Having got your globe all ready, commence your illusion thus : "Ladies and gentlemen, I have here a large bowl of ink. You may look surprised to see so much, but when I tell you I am very fond of writing love-letters, you will, of course, agree that I ought to have the quantity here produced." Take up the

spoon ; at the same time remove the little piece of paper at the top of the hole ; then pretend to put the spoon into the bowl, but place it on the top of the water, and be very careful that you do not spill one drop of the ink into the water, for if you do, you may rest assured you have spoilt the illusion. By this time the ink will have come into the bowl of the spoon ; then pour it out on a white saucer, and show it round to your audience. When you have satisfied them it is real ink, borrow a gentleman's large pocket handkerchief and throw it over the globe, taking up the globe with the left hand. Take off the handkerchief gently ; at the same time be sure you have hold of the silk with the right hand, and to the astonishment of your audience, you will show you have commanded the bowl of ink to change to water, with fish swimming about. While the audience are looking at your fish, walk up to the table, give the handkerchief a shake, and the silk will drop under the table. You can then return the handkerchief to the person who lent it you.

A CAPITAL ROPE TRICK.

Let your wrists be firmly tied together with a handkerchief, then have a length of clothes-line (about twelve feet) passed through the space enclosed by your arms, and the ends be tied. Let the assistant stand away at the end of the doubled rope. To release yourself from the rope without untying the handkerchief, you must first pull hard against the holder of the rope, so as to get it well between the wrists. Now, on slackening the rope, the fingers can seize it and work it through the handkerchief till a loop is within, through which one hand is slipped. A pull from the assistant will disengage the rope wholly from the hands and arms.

THE MYSTIC RING.

Several very marvellous tricks can be shown with an ordinary finger ring, such as passing it through the table, through a basin, an ale glass, or a plate, then into a box or nest of boxes, and other feats of sleight-of-hand, of a similar kind. These tricks are so good that they are always shown by the

professors of legerdemain at evening parties, but are never explained; however, I will try and attempt it. Procure a soft clean silk handkerchief, and a sham gold ring; now, a needleful of black silk, double; sew the silk to the middle of the handkerchief, and let the ring hang from it, suspended by the end of the silk, say at about three or four inches from the kerchief. When the handkerchief is held up by two corners, the suspended ring must always hang on the side facing the conjuror; the handkerchief can then be shaken, folded, and crumpled up in the hands, so as to make it appear "all fair." Now, to pass a ring through a drinking glass or plate, and through the table on which it is placed. "If any lady or gentleman will kindly lend me a ring, I shall be happy to exhibit the electric and magnetic action of metallic substances on diaphonous bodies and ceramic manufactures, by showing their imperviousness, and the porosity of the ligneous products of the Honduras." "Hem!" says Aunt Maria, "what an extraordinary young man!" Do not, however, allow yourself to be carried away by any flattery of this kind, but determine to do the trick well, and deserve praise. Take the borrowed ring in the left hand, and keep it there; pretend to pass it to the right hand, and say, "I will place it in the handkerchief. Who will kindly hold it for me, while I put the glass on the plate in the centre of the table?" While you thus freely ask who will hold the handkerchief, you will secure the most bashful lady or gentleman in the company to hold the (your) ring in the handkerchief. "You will perceive, ladies and gentlemen, that the glass and the plate are now quite empty. I shall now place the glass in the plate on to the centre of the table, and request the lady (or gent.) to place the ring and the handkerchief over the glass. I particularly draw your attention to the fact that you will *hear* the ring fall into the glass when I request it to be released. You will then be certain that it is in the glass; but at my command it shall pass into this box (show the box round), which I shall place under the table. Now, Miss (or Sir), be good enough to let the ring fall into the glass. Silence! Ting! You heard it fall?" "Yes," all must reply, except the deaf. Presto! It is now in the box. You lift the handkerchief, smooth down your brow with it, and put it into

your pocket. The audience are now left to themselves ; they rush to the plate and glass—it is not there ; now the box. Behold ! it is as sound as ever. How it got there Aunt Maria could never tell, but you could, for you put it there, out of your left hand when you placed the box under the table.

THE JAPANESE FAN AND BUTTERFLY.

This illusion was first introduced into this country by the wonderful troupe of Japanese jugglers, and I am sure it will be admitted by all who have seen it that it is a beautiful and clever experiment. To watch the paper butterfly fluttering round and round in the air, now lighting upon one rose, then upon another, and again upon the fan, and the artistic way these clever performers use their fans, would lead to the conclusion that the butterfly is kept up in the air by the wind produced by the fans ; but it is not so. In the first place get two fans ; then from a sheet of white tissue paper cut out a pattern as near as you can of a butterfly. Get a hair about eight inches long, and with a little gum fasten the end to the butterfly. Open one of the fans at the top, and with a pin prick a small hole ; pass the other end of the hair through the hole in the fan, gumming the end about one inch. Then make another butterfly ; close the fan, the butterfly being in between the folds, attached to the hair. Also have a flower-pot, with some kind of paper flowers in it, upon your table. Commence the illusion by introducing butterfly No. 2 ; whilst the audience are looking at it, walk back to your table and take up the prepared fan with the left hand ; return to your audience for the other butterfly, but do not in any way open the fan. Take it from them with the right hand, and on returning towards your table, squeeze up the paper, open the fan quickly, and at once commence fanning, and the paper butterfly will be seen flying about in the air. The audience will, of course, think it is the same as handed by you to them. Then take up the other fan with the right hand, opening it, and also fanning under the butterfly. You will now be able to make it settle upon the flower, also on the top of the right hand

fan, because the movement of the left hand can guide it wherever you may wish. You may, in the course of practice, be able to keep up two; but I would strongly advise you not to attempt more than one at first. Of course, the piano will be playing during the performance, which will give your illusion a better effect. In concluding the experiment catch the butterfly between the two fans, and remove them behind your screens.

THE MAGIC BOTTLE.

This trick, if well managed, is one of the most wonderful that can be performed in a drawing-room without apparatus; but it requires dexterity at the conclusion.

The person performing the trick offers to pour from a common wine bottle port wine, sherry, milk, and champagne in succession, and in any order.

To accomplish this trick you must make solutions of the following chemicals, and label the bottles with numbers, thus:

1. A saturated solution of the sulpho-cyanate of potash.
2. A diluted solution of the above—one part of the solution to four of water.
3. A saturated solution of nitrate of lead.
4. A saturated solution of perchloride of iron.
5. A saturated solution of bicarbonate of potash.
6. Sulphuric acid.
7. A clear solution of gum-Arabic.

Procure a champagne-bottle, and wash it out well; then pour three teaspoonfuls of No. 4 into it. As the quantity is very small, it will not be observed, especially if you are quick in your movements. Pour some distilled, or rain water, into a common water bottle or jug, and add a tablespoonful of No. 7 to it; then set it aside ready for use. Provide some wine glasses of four different patterns, and into one pattern pour the solution marked No. 1, into another that marked No. 2, and so on for Nos. 3 and 5. Return the solutions to their respective bottles, and arrange the glasses on a small tray, remembering the solutions that were poured into each pattern.

Everything being ready, take the champagne bottle that you have prepared from amongst two or three others, and,

holding it up to show the company that it is clear and empty, you must desire some person to hand you the water bottle or jug, and then fill up the bottle with the water. Pour some of the contents of the bottle into an unprepared glass, so as to show that it is water; then say, "Change to champagne," and pour the liquid from the bottle into one of the glasses rinsed with No. 5; then pour into a glass rinsed with No. 1, and it will change to port wine: but if poured into No. 3 it will change to milk, and if into No. 2 it will produce sherry. Be careful in pouring the fluid from the bottle not to hold it high above the glasses, but to keep the mouth of it close to the edges of the glasses, otherwise it will be observed that it undergoes a change of colour after it is poured out, and on this account the glasses should be held rather high.

N.B.—As the solutions used in the above trick are deleterious, they must not be left in the way of children, and, of course, the fluid in the wine-glasses must not even be tasted.

THE VANISHING TUMBLER AND WATER.

This illusion I am about to describe is a beautiful one, and great care ought to be taken by the amateur to perform it with neatness, for it is one of my own illusions which I perform; therefore I should advise no one to attempt to perform it, unless first having well practised.

In the first place, lay two thin, long glasses, one filled with water, and place a small piece of oil silk over it, with a band to keep it in its place; put this in your side coat pocket. You then get a large square piece of black alpaca, and put it in the centre (the size of the glass); a ring made of black whalebone or cane. Having got this all ready, commence the illusion by saying, "Ladies and gentlemen, I have here a glass tumbler." Fill it with water, and place the cloth over it; be sure to place the ring in the cloth on the glass, at the same time pitch the ring up with the right hand, and put the glass under the table with your left hand. The audience will think you had the glass under the cloth; you can make it vanish and come again. Shake your cloth out, and show the glass is gone; place the cloth on your left arm with your

right hand under; take the glass you have in your pocket out, take off the oil cover, and produce the invisible glass, much to the great astonishment of the audience. This illusion requires great practice.

AN ADVANTAGEOUS WAGER.

Request a lady to lend you a watch; examine it, and give a guess as to its value; then offer to lay the owner a wager (considerably below the real value of the watch) that she will not answer to three questions which you will put to her consecutively, "My watch." Show her the watch, and say "What is this which I hold in my hand?" She, of course, will not fail to reply, "My watch." Next present to her notice some other object, repeating the same question. If she names the object you present, she loses the wager; but if she be on her guard, and remembering her stake, she says, "My watch," she must, of course, win. And you, therefore, to divert her attention, should observe to her, "You are certain to win the stake, but supposing I lose, what will you give me?" And if, confident of success, she replies for the third time, "My watch;" then take it, and leave her the wager agreed on.

THE BLOOD WRITING ON THE ARM.

No doubt those who have seen this illusion of the mysterious writing performed have been greatly astonished. In the first place, you must have a confederate sitting among the audience, so that when you call upon one of them to write what they think proper on a piece of paper which you will give them, your confederate will here propose to write a word. On his doing so, give him a piece of paper, telling him to fold the paper up after he has written a word upon it, so that you cannot see the writing. You must now bear in mind the word your confederate will write, or you must know it previously, say "Richard," or "Mary," or whatever it may be. Before commencing your illusion, take a piece of dry soap and point it; then tuck up the shirt sleeve of the left arm, and write the word with the soap on the arm; then draw down the sleeve, and commence your illusion. After he has written on the paper and folded it up, burn the paper in the

flame of a candle. Then pull up your coat sleeve, unfasten your shirt, and show the audience there is nothing on your arm. The soap they cannot see. Take up the burnt ashes with the right hand, and rub it upon the left arm, when, to the great astonishment of the audience, the word written by your confederate on the paper will appear quite legible on your arm.

THE FLYING MATHEMATICS.

This is a new and beautiful experiment. In the first place, have about half-a-dozen plain pieces of writing paper all the same size. Then write on one of them the following figures, but write each row of figures differently :—

3	6	2
1	0	3
5	2	7

leaving the total to be added up, which, when done, will be 992. Print the total large on a piece of paper the same size as the others, and fold it up, making the audience believe you are folding up one of the plain pieces, and put it inside of a lady's glove, telling her to keep it safe. Now have another piece of paper with the other numbers written in pencil; fold it up small, and palm it with the left hand; take up one of the pieces of plain paper, and get three of the audience to write down three figures each. Now fold it up, and, as you are walking from them, change the paper for your own figures, and slip the other into your pocket. Then turn to your audience, saying, "By-the-bye, I forgot to have these figures added up." Here go to the fourth person and ask him to add them up; but be sure you don't go to either of the other three, as they will see at once the figures are changed. When the fourth person has added them up, take the paper away, ask him to tell you the total, when he will say, "992." Burn the paper, and place the

ashes on a plate; take up your wand, and, touching the ashes, say, "Total, I command you to leave the plate, and appear printed on the plain piece of paper that I put in the lady's glove;" tell the lady to open her glove and take out the paper, when the number "992" will be found to be printed on the paper. It requires a little skill and dexterity to be able to accomplish the illusion.

MAGICAL WAY OF TELLING THE HOUR SECRETLY THOUGHT OF BY ONE OF THE AUDIENCE.

Take a watch in one hand and a pencil in the other. Ask any person to think of any hour he pleases. Now tap any hours on the watch with your pencil, at the same time telling the person to mentally count the taps, *beginning from the number he thought of.* (Thus, if the hour he thought of was "seven," he would count the first tap "eight," and so on.) When, according to this method of counting, he reaches the number twenty, he is to say "stop," when the performer's pencil will be found on the hour he thought of. This trick may be called an arithmetical trick, as it depends on a simple arithmetical principle. The performer counts mentally the taps he gives, calling the first tap "one," and so on. It makes no matter where he gives the first seven taps, *but the eighth tap must be given on the figure twelve of the watch.* From twelve the pencil must tap *seriatim*, but going backwards—"eleven," "ten," etc. By tapping in this order it will be found that at the tap which the spectator made "twenty" and cried "stop," the pencil will have travelled back to that very number. This is a capital trick, and should be practised by the conjuror.

THE GREAT PISTOL ILLUSION.

In the first place, you must have a pistol with rather a long barrel, and three leaden bullets. Commence the illusion by telling the audience to mark the bullets; they having done so will return them on a plate. You must also have three other bullets made of common black lead at the time you are talking to your audience. The leaden bullets must be changed for the composition ones and concealed in the

palm of your hand. The pistol must be taken up and loaded with powder. The black-lead bullets must be placed in the pistol; the audience will of course think you are putting in the real ones. Take an iron ramrod and ram the pistol well, by so doing the black-lead bullets will break to powder. Then put in a small piece of paper, and hand the pistol to one of your audience, requesting him to stand back a short distance and fire at your hand when you count three, the leaden bullets being concealed between the finger and the thumb of the left hand. When he fires pretend to catch them with your hand; show them to the audience, also the person or persons who marked them, and to the great astonishment of all it will be thought that the bullets you show are the ones that were placed in the pistol.

THE MAGICAL WAY OF TELLING ON WHICH SIDE A FLORIN
FALLS AFTER BEING SPUN.

Ask any one of the company to lend you a florin, and spin it on a table without a cloth. Ask some other person to blindfold you, and wait until the florin has spun itself out. You can tell at once, although you do not feel or see the coin, the side on which it has fallen. In order to perform this trick you must have a prepared florin of your own. On one side of your own florin (say the "head" side) make a little notch on its extreme edge, which will cause a little tooth of metal to project from that side of the coin. You can easily change the person's florin for your prepared one. Now spin your own florin, and if it makes the usual "whirr" of a coin spinning, you know that the notched side must be upwards. If, on the other hand, the coin when spinning down gradually ceases with a sort of half whirr, you know that the notched side, and, consequently, the "head" of the coin, must be downwards. The best guide, however, is to listen whether the coin runs down fast or slow. If you notch the "tail" side and it runs down slowly, you know it must be "tail;" if quickly, "head."

THE MAGIC TRANSFORMATION.

This illusion is very simple, and a capital one for the amateur to introduce in his first magic entertainment. Have

a small box made about five or six inches square, and about four inches deep, with a false lid and cover to fit over it. On the false lid, with a little glue, put some Indian corn; place in the box a little bird, and then put on the false lid, when it will appear as though it were full of seed. But be sure you have made in the sides of the box five little holes about the size of a pin's head to admit air to the bird. Commence the illusion by showing the box as if full of seed, and then place on the cover; take up your wand and touch the box, saying, "Seed disappear, and in its place let a live bird appear." Lift up the box and remove the cover, taking off the false lid with it, when the bird will fly out.

THE VANISHING KNOTS.

This trick must be performed with a silk handkerchief. After twisting it like a rope, grasp it in the middle with both hands, and ask any person to tie the two ends together. Ask him to tie them still tighter, and help him in making the knot or knots tighter. Take the handkerchief, covering the knots with the loose part, and give it to some one to hold. Breathe on it, and ask him to shake out the handkerchief, when all the knots will be found to have disappeared. The whole trick lies in the performer tightening the knot. The performer when he tightens the knot merely strains one end of the handkerchief, for he grasps it above and below the knot. Of course that pulls out this end of the handkerchief from a twist into a straight line, and converts the remaining knot into a slip knot. After every knot he always straightens this same end of the handkerchief. This end, therefore, will naturally be longer than the other end, which is twisted round it. The performer counteracts this tendency by drawing it partially back through the slip knot at each pretended tightening. At the time that he finally covers the knots with the rest of the handkerchief, holding the straight part of the handkerchief, behind the knots, between the first finger and thumb of the right hand, and in the act of covering the knots, he draws this straight part completely out of the slip knot. There is one knot which cannot be pulled according to the way done in the trick. It is the common

mode of tying, when the two ends are placed side by side and tied simultaneously in a single knot. To avoid this, hold the two ends that are to be tied at a wide angle, so that it will not be easy to draw them parallel. If, however, anyone ties this particular knot, you can get it unloosed again by asking some other person to untie the knot and give the audience a fair criterion of the time it would take in getting rid of the rest of the knots.

THE INVISIBLE SECRET.

This experiment is certainly a wonderful deception, and not an expensive one. It was first discovered many years ago in London, and a gentleman who was well known for his talent as a professor of legerdemain brought together a large audience to witness his experiment in the Strand. His bills set forth a wonderful new discovery, which was to surprise and astonish all the beholders. His apparatus was a large looking-glass, on which was displayed a variety of devices and some very pretty verses, descriptive and applicable to his design. This was handed round the company. The professor then took out his pocket-handkerchief and wiped it all out, and the glass appeared without the least mark whatever; but on his desiring any one of the audience to breathe upon the glass, the writing and characters became as visible as ever. The experiment caused great excitement among the audience present. This wonderful illusion is simply performed with French chalk—a natural compound production of earth—which can be bought at any oil shop; it is of a very greasy but extraordinary nature, and has often been made use of to draw portraits upon looking-glasses. This is a capital experiment for an amateur, and I would strongly recommend him to introduce it to his audience.

THE FLYING WATCH.

This illusion requires a little practice, and I can only repeat that "practice makes perfect." Commence the illusion by borrowing a gentleman's silver watch, and a lady's white pocket handkerchief; the handkerchief you roll up, and, as

you walk round the table, change it for one of your own. Now place the watch in it, and request one of the audience to cut the watch out of the handkerchief; having done so, tell the lady you are very sorry for cutting the handkerchief, but will try and restore it. You now borrow a gentleman's large handkerchief, and pretend to wrap the watch up in it, but, instead of so doing, slip the watch down the sleeve of your coat, and place the handkerchief in the coat pocket of your friend (who cut the handkerchief), telling him to take great care of the watch; you then tell him you will fetch him a small bottle of wine. Go behind the screen, and give your confederate the watch, who will place it in a loaf of bread; bring out a small bottle, with the bottom cut out (porter bottle), take it behind the table, and slip in the lady's pocket handkerchief; tell your friend you are sorry you have no wine, only an empty bottle, but as you have disappointed him, you will give him some supper; then fetch out the bread that contains the watch. Now, ask him for the watch; he will undo the handkerchief, and find that the watch is gone. You then tell the audience you will command the gentleman's watch to appear in the loaf of bread; cut the bread, and restore the watch. Pick up the lady's pocket handkerchief (as supposed), roll it up, and place it in a piece of paper; while you walk past the table, change it for another like it, then burn the paper, and command the lady's handkerchief to appear in the bottle; then break the bottle, and to the great astonishment of all, it will seem as if the handkerchief had passed into the bottle.

THE MARVELLOUS PIGEON.

For this illusion you must have an inside pocket, in the left hand side of your dress coat. Place in your pocket a small pigeon (a young one, if possible). Commence, by borrowing a gentleman's high hat, and place it on your table; borrow a second one, and, on walking back from your audience (carrying the hat in your left hand), slip your right hand into your pocket, pull out the pigeon, and pass the hat over the hand; hold the hat this time with the right hand, and the pigeon will then be quite safe in the hat;

place the hat upon your table, also putting the other hat over the pigeon; ask one of your audience to lend you a two-shilling piece; then say to your audience, "Ladies and gentlemen, I have given you a number of different illusions this evening, and now I intend to make a little change. This two-shilling piece which you see, I mean to pass from my hand into the bottom hat, but, before doing so, I would like to know whether you wish it to turn head or tail up; as you choose, so will I command." Some of your audience will say "Head," others "Tail;" pretend to place the coin in your right hand, but, instead of doing so, palm it with the left; close your right, making your audience believe you have the coin safe. Take up your wand with the left hand—thus concealing the coin altogether; touch your right hand with it, saying, "Coin, fly;" open your hand, and, of course, the coin is not there. Then request the person that lent you the coin to walk up to your table and take off the top hat, and see whether he finds there a "head" or "tail." When he lifts the hat, he may possibly say it is "head *and* tail"—your audience, laughing the while, not knowing there is a pigeon in the hat. Turn to your audience, and say, "Ah, ladies and gentlemen, you laugh at my friend's remark; but he is right, as he will show you." Let him then put his hand into the hat, when, to the amusement of your audience, he will produce the pigeon, and show the head and tail literally together. This illusion requires considerable practice and dexterity, also a merry way about the performer.

THE ENCHANTED ROSE.

This is a very pretty illusion, and requires but little practice to produce a good effect. Get a small rose, such as you see in ladies' bonnets, also about half a yard of round black elastic. Fasten the elastic to the end of the stem of the rose, drawing the other end through the left-hand button-hole of your coat, and the rose will fit into the hole. Next tie the end of the elastic to the under button of your vest; take hold of the rose with the right hand, and place it under the left arm, which will strain the elastic. Commence your experiment by saying, "Ladies and gentlemen, I would like very

much to borrow a rose for my coat, but I fear you may think I shall not return it. I will try, therefore, if I cannot by my own skill make appear a full blown rose in the button-hole of my coat." Taking up your wand with the right hand, and gently raising the left hand over the button-hole, say, "Rose, appear." Now raise your left arm up rather quickly, when the rose will slip into the button-hole of your coat.

THE MAGIC RING AND SILK HANDKERCHIEF.

For this experiment you require a piece of wire with the end pointed very fine; also have behind your table an orange with a slit in it, so as to receive the ring. Place the piece of wire in your left hand, and commence the trick by borrowing a gentleman's silk pocket handkerchief and a lady's wedding ring. Place the ring upon your table; then give the handkerchief a shake to show your audience it contains nothing. Lay the handkerchief over your left hand, and pick the ring up with your right hand; pretend to place the ring into the handkerchief, but really into the palm of the left hand, slipping the wire into the handkerchief, and doubling the centre of the same round it. Then ask some one to hold the handkerchief while you get a small piece of string. When you are looking for the string slip the ring into the prepared orange, and place it upon the table; then produce it, and tie it round the handkerchief about two or three inches from the supposed ring, and at the same time inform your audience how very carefully it is secured. Take hold of the ring with your right hand, and request some person to place the four corners of the handkerchief over your hand. As soon as he commences to do so you must set to work to open the fictitious ring and draw the point through the handkerchief, passing it from the right hand to the left, so that you will be able to slip the same into your left palm. Let the person touch the handkerchief with your magic wand, and at the same time say, "Ring, fly;" give it to them to untie, when it will be found the ring has disappeared. Take up the orange with the ring in it, also a knife, and pretend to cut the orange, but really let the knife go into the prepared slit, saying, "Perhaps some other person would like to cut this orange?"

Let them do so, when they will be surprised to find the borrowed ring in the centre.

THE MAGIC WAND.

Some time ago the following apparently marvellous trick was introduced. The performer takes up his wand with one hand, and holding it with one finger, shows that he can retain it suspended in air, and even make it describe all manner of circles in the air. To all appearances the wand is smooth ebony, and to prove that there is no glutinous matter on it, the performer rolls it among some dry feathers, and yet it takes up none. This is the explanation. Though apparently smooth, in the wand is set firmly a fine steel point, barbed on the side towards the wood, and bent at an angle. There may be one at each end and another in the centre of the wand, if required. All are japanned to be the same colour as the wood. The flesh of the fingers each side of the nails, and the thick part over each root of the fingers within the hand, are tough enough to give a good hold to these points.

One of the most telling feats of the Hindoo jugglers is founded on this same deception : a man steps on two boards, with his naked feet, when they mysteriously become sufficiently attached to his soles for him to dance.

THE MAGIC WINE GLASS.

This experiment is rather amusing, and if the amateur perform it according to direction, cannot fail to create a laugh. Take two bottles to a chemist and get about three-penny worth of silicate of potash in bottle No. 1, and three-penny worth of aluminate of potash in the second bottle. Commence your illusion by requesting one of the audience to come forward and ask him if he would like a glass of wine? Take up a wine glass, and pour from bottle No. 1 about half-a-glass, saying "I beg pardon, Sir, but if I were to fill the glass quite full, I am afraid I might make you tipsy; therefore, I will add a little water." Take up bottle No. 2 and fill the glass, then take a spoon and stir it, and

whilst saying a few words to amuse the audience, the supposed wine will be mixing. Give the glass to your friend, which, when he puts it to his mouth to drink, he will find has become hard; and of course he will look surprised. Ask him what is the matter, when he will tell the audience, much to their amusement. Now get a plate, and giving the glass a good shake, to the surprise of all you will turn out the contents on the plate, solid.

THE MYSTERIOUS RING.

This is a most beautiful experiment, and, if performed with skill and dexterity, will greatly astonish your audience. In the first place, buy three brass wedding-rings, then get two cards from a plain pack; take off the backs, and put in the centre of each card a ring. Gum the backs well, and place them over the rings; when dry, the audience will not be able to discover the rings. Place the cards upright on a stand on your table, so that they can be seen. Having secured the two rings and cards all right, take the third ring and tie it to a piece of white cotton four or five inches long, the other end of the cotton you sew to the centre of a white pocket handkerchief. Get also an orange or lemon, with a slit in it, so that you may be able to pass the wedding-ring into it when required to do so. Having all these articles ready, commence your illusion as follows:—"Ladies and gentlemen, I now wish to borrow a lady's wedding-ring." Take up your pocket handkerchief, and give it a shake, no one will see the ring tied to the cotton; pretend to place the wedding-ring (borrowed) in the handkerchief, but, instead of doing so, palm it with the left hand. Now give the handkerchief to some lady to hold; tell her to hold the ring tight while you fetch a plate; walk up to the table for it, and, while doing so, put your hand into your pocket, and slip the gold ring into your orange, leaving it there. Let the lady hold the plate, while you put the ends of the handkerchief over it, letting the lady still hold the ring, so that you can hear it drop on the plate when you desire her to let it go. Tell the audience you have an orange in your pocket that will help you to perform your illusion; take it out, and pick

up a knife, and slip it into the slit, holding the ring, giving the knife to some one else to hold, with the orange remaining at the other end of the knife. Now, ask the lady if she has the ring, and of course she will reply "Yes." Tell her when you count one, two, three, to drop the ring on to the plate; then pick up the corner of the handkerchief quickly, and of course you take the ring away with it. Ask the lady for the ring, when, to her astonishment, the ring has vanished. Desire the lady to say which of the cards standing on the table you shall command the ring to appear in; when she has chosen one, break open the card, and let the ring drop on a plate on your table. Now borrow a pocket handkerchief, and pretend to wrap the ring up in it, but palm the ring with the left hand. Roll up the handkerchief and place it on your table; take up your wand, saying, "Ring, I command you to fly from this handkerchief into the orange that gentleman (pointing to him) is holding. Shake the handkerchief, and show that the ring is gone. Then tell the gentleman to cut open the orange, and the lady's wedding ring will be found in the centre. This experiment requires great practice before being introduced to the public.

THE SIAMESE COINS.

This is a capital experiment for the drawing-room, and, if performed with a little skill, will cause great amusement. In the first place, get a piece of black alpaca, the size of a gentleman's pocket handkerchief, and sew a penny-piece in the centre. Commence your illusion by borrowing a penny piece and a two-shilling piece, then having them marked, pretend to place the penny in the black cloth, but of course palm it with the left hand; give the black cloth to some one to hold, asking him if he has the penny safe; he will reply "Yes;" then borrow a lady's handkerchief, take up the two-shilling-piece, and wrap it up in the handkerchief, but be sure to wrap the penny up at the same time, giving it to the lady to hold, then ask the gentleman if he has the penny safe, when he will again say "Yes;" tell the audience the coins you have borrowed, it is strange to say, are like the "late Siamese twins," for whenever you command them to appear,

they will always go together." Take hold of the corner of the black cloth, saying, "Penny begone to the ladies' pocket handkerchief," giving the cloth a shake, which place upon your table ; tell the lady holding the handkerchief to shake it out on a plate, and, to the great surprise of the audience, the coins that were borrowed and marked have arrived together.

THE SHOWER OF MONEY.

This is a most charming illusion, and is performed by several well-known conjurors, but, as I perform it, I shall give my version, which will be found to be the newest. In the first place, the amateur who thinks about introducing this illusion in public, must bear in mind that unless he can palm with great neatness, it will be useless to attempt it. Let him palm, with the left hand, twelve penny pieces, and one penny piece with the right hand. Borrow a gentleman's high hat and hold it with the left hand ; the four fingers being inside, holding the coins tight. Now pretend, with the right hand, to catch a penny from the air, showing it ; pretend to pass it through the crown of the hat, saying, "Presto, pass through," which, of course, palm in the right hand, and let one drop from the left hand into the hat. The audience will think that the penny went through the hat. Then take the penny from the flame of a candle ; also from the audience, repeating the above till the twelve coins are gone into the hat ; when this is done, place the hat on the top of a large glass tumbler on your table. Your confederate will be under the table, with another hat and a few coins in it ; then still having the penny in the right hand, pretend to catch some more—say about four or six—and pretend to put them in the left hand, but palm it with the right ; open the left hand quickly, saying, "Penny, fly into the hat." Your confederate at the word "fly" will drop one penny into his hat which the audience will think is gone into the real one ; when you think you have amused your audience long enough, take up the hat, and to their surprise, empty the coins out on a plate. This is a very good illusion, but requires great practice.

TO EXTINGUISH THREE CANDLES AND LIGHT
THREE OTHERS AT COMMAND.

For this experiment you must provide yourself with six wax candles. Let three of the candles burn a short time, and then blow them out. Afterwards snuff them. Take some phosphorus and put into the middle of the wick of the three candles which you intend to light, about the size of a millett grain. To do this you must divide the wick of the candles with a long pin. But note:—I would draw the amateur's attention most particularly to the fact that he must take great care not to touch the phosphorus with his fingers, but let him use the point of his knife; also to bear in mind that the wick of the candles must be cold before you put the phosphorus to it, otherwise it would catch fire immediately. Place your candles, one after the other, on your table; take up your pistol and load it with powder in the usual way; then stand about six feet from the table with the pistol in your hand, at the same time saying as follows:—"Ladies and gentlemen, I shall fire at the three lighted candles now before you; and at the instant I fire, the three candles now burning I shall extinguish, at the same time lighting the other three." Then fire your pistol, and the candles burning will be extinguished by the powder, while at the same time the phosphorus will take fire, which will immediately light the other three. I would recommend the amateur to practise the above several times before he introduces it to his friends.

In concluding Part II. I will relate the following story, in which a writer recounts the "fix" a brother professor of the art extricated himself from through his cleverness and presence of mind. For modest reasons the real name of the conjuror is not mentioned, but the story is known as

"PROFESSOR GRIGNON AND THE ASTONISHED NATIVES."

It was a pleasant event in my life when I was thrown into the company of Grignon. I was on my way to California, and had taken the overland route in preference to any other.

It was on my journey across the plains that I made his acquaintance. Our party overtook a single waggon; it contained a solitary man; the horses were dead, and the man nearly so; this man was Grignon. I paid the utmost attention to his wants; being a medical man, I gave him all the benefit of my skill and care. As he recovered, he naturally entertained a strong friendship for me. His waggon had fallen behind the train to which he belonged, and they had been compelled by their own necessities to desert him.

The conjuror, however, was destined for a far more glorious fate than to die miserably in the desolate American desert. He was to become an astonisher to the natives (Indians), a saviour of civilised lives, and a lion in California.

We resumed our journey. We had started, however, like many others in those days, with insufficient preparations. As soon as we found our mistake, we had to be very economical in our provisions. We killed buffaloes whenever we found them, and always replenished our water-cask at every stream. At length, however, we came to a dry and parched waste, where there was scarcely a drop of water, scarcely a blade of grass, and not a single living animal of any description.

And now began the troubles of our journey. We had come into the country of the warlike Indians, and they were not slow to acquaint us with the fact. Every day they prowled around us in great numbers, threatening and insulting us. Occasionally they used to snatch up something and dart away on their horses. We did all we could to be friendly, and determined to avoid an open rupture as far as possible, for there were only twelve on our side, and on their side apparently twelve hundred.

Every day, however, only made matters worse. In spite of our precautions the Indians grew more and more abusive and insulting. We became watchful, and tried to be more forbearing, but our forbearance was taken for cowardice, and the savages began to think that they could do anything with us.

We held a council of war, and determined to bring matters to a crisis at once.

The crisis soon came.

One day a big Indian came riding along by us. He began talking in a contemptuous way, and gesticulating furiously. At last he asked one of our men for his gun. The man refused. The Indian repeated his question, and attempted to take the gun from his hand. The man drew back. The Indian sprang forward, flourishing his knife and threatening. At this the man calmly levelled his piece and shot the Indian through the heart.

As the wretch fell shrieking from his horse, the plain seemed to be alive with other Indians. From behind every clump of trees, every hillock, every rock, and every rising ground, they poured forth in countless numbers. We had never before seen so many assemble together as now.

And now our companion, the conjuror, came out conspicuously. He had been once in the French army, he said, and understood all its admirable discipline. A few words of warning and a short explanation sufficed to make us form a circle of the waggons, and draw up behind them, with baggage heaped up for breastworks. There we waited for the savages.

But they did not come just then. With loud whoops and screams they gathered upon the plain at a distance from us. The wretched cowards! as soon as they saw our slight preparations, they were actually afraid to attack.

They waited till night, but that attack in the early morning which is the savages' custom, we successfully repulsed.

At last there arose a wild tramp of horses, the sound moving away from us, and seeming to show that our enemies had retired baffled from the assault.

Yet we were afraid of some plot. Grignon made us keep our watch, and we lay on our arms, expecting every moment to hear the Indian yell which announced the assault of the savages.

After a long watch, which seemed interminable, morning dawned. As the light illumined the wide plain we looked around anxiously for our enemies, but saw none whatever. Most of us thought we had better hurry on; but Grignon gave it as his opinion that the Indians were yet in the neighbourhood, and were waiting to attack us on the march. He thought that we had better wait at least another day. We all yielded to his opinion, and waited as best we could.

We had not long to wait.

After a few hours, at about ten o'clock, ten or a dozen horsemen appeared over a hillock in the distance, riding slowly towards us.

"They wish to have a parley," said Grignon. "Some of you step forth and see what they want. I wish to have a word to say, but will wait."

One of our men was selected, and went outside of our enclosure to meet them.

Meanwhile Grignon lifted a trunk out of the waggon which belonged to him, drew it outside, and busied himself coolly in arranging and turning over the things. To tell the truth, he was preparing himself to execute his astounding experiments, of which more in the proper place.

We all thought this was done for the purpose of assuming an air of indifference ; so none of us noticed him particularly.

Our representative stood outside, waiting for the Indians. Ten of them dismounted, and walked towards us in a friendly manner, while the rest held the horses. One of them addressed our men in broken English. The Indians, he said, did not want our lives ; they wanted powder. If we would give them what we had they would let us go in safety, and protect us from other tribes till we got beyond the plains.

Give them our powder ! A pleasant request. It scarcely needed debate ; we refused.

Well, then, would we give them our bullets ? They were very much in want of bullets.

One of us said in low voice that bullets were the only thing they would get from us, but the Indians did not hear him. Our representatives refused very mildly.

The Indians now stood talking with one another. Grignon advanced towards them. He whispered something in a low voice to our representative, who immediately withdrew.

Grignon then stood facing the Indians.

"Are you captain ?" said the spokesman of the Indians, suddenly, as he noticed Grignon.

"No ; I'm the medicine man ; you can't shoot those men nor these horses. I save them."

The Indian translated this to his companions, who burst into roars of laughter.

Grignon advanced more closely. He was looking steadily at the Indian, and we noticed that the latter appeared to be uncomfortable under his gaze.

"See," said Grignon, "you can't shoot me. Here"—and he drew a pistol from his pocket, a revolver—"fire at me."

The Indian smiled.

"You don't want me to kill you?" said he, scornfully.

"You can't."

The Indian's eyes flashed.

"Shoot!" cried Grignon, folding his arms.

The Indian hesitated a moment. He looked at us suspiciously. Then he looked at his companions and said something in their language. They all responded vehemently.

The Indian took aim.

"You tell me to shoot?" said he.

"Shoot!" said Grignon again.

The Indian fired. Grignon smiled, and walking forward to the Indian, he handed him a bullet. The Indian looked paralyzed. Grignon showed him how to fire it again. The Indian fired the other five shots. Grignon caught each bullet, sometimes seeming to catch it from his breast, sometimes from his face, and each time he handed it to the Indian. The other Indians were now in a wild excitement, for they had never dreamed of that useful little article, the conjuror's pistol, much less that to make a revolver on the same principle is no extra pains. The bullets were real, of course, and the charges in the chambers were mere frauds and deceptions.

"They may all shoot if they choose," said Grignon accommodatingly, and saying this, he went to his trunk, and, coming up to them, proceeded to load each one. He took the powder and put it in, then the wadding and bullet, and the Indians saw him do it. He handed a pistol to each on loading it. Suddenly one of the fellows took aim and fired. Grignon, without seeming to have noticed him, raised his hand and seemed to catch a bullet from his forehead. He tossed this towards the Indian, who picked it up with an air of stupefaction; but instantly his look was changed to one of horror, for the bullet of lead suddenly melted in his hand and became a clot of gore. Brandishing over his head his

blood-dripping hand, he dashed away in a tremor, crying aloud : "Medicine ! medicine ; him know heap medicine, for sure !" .

Meanwhile the professor bade the rest to fire, and eight reports sounded in rapid succession.

Grignon took off his hat and walked up to the Indians. To their amazement eight bullets were in his hat. Each man took and looked at in wonder. To their unsophisticated eyes those large pistols were even sounder weapons than the more modern repeater, but, as we know, they were the magical firearms, from which, in the act of apparently ramming home the ball, the latter is seized secretly by the hollow head of the ramrod and brought back to the performer's hand.

"Do you want to fire again ?" asked Grignon.

They all expressed a wish to do so.

"Well, hand me the pistols."

To their amazement the pistols were gone, by the simplest act of jugglery known—the palming away of an object—but to them incomprehensible. They looked at one another in wonder.

"You see," said Grignon, "they fired the pistols at me, too, and I swallowed them."

"Swallowed them !" faltered the Indian, and he told this to his astonished companions.

"Yes ; do you want them ?"

The Indian nodded. Whereupon Grignon opened his mouth, and, rolling back his eyes, he inserted his fingers and drew a pistol apparently from his throat. Another followed ; Then he drew forth a third, then a fourth, and so on, until he had drawn forth the eight pistols from his throat, while the Indians stood looking on in utter bewilderment. And no wonder, for we ourselves felt no less astonishment. We could not account for it : we were as much stupefied as the Indians themselves, for we had not been part of audiences at *seances* of magic. After this Grignon calmly drew forth six or eight more pistols, then a number of cartridges, and finally a carbine.

"I'm the medicine man" said he, solemnly. The Indians said not a word. "Do you want to fire again ?" said he, and he offered pistols to the Indians. They all shrank back in

horror. Grignon tossed the pistols, cartridges, and carbine over to us, and smiled benignantly on the astonished savages. He then shook his hand; a knife fell out of the palm—another followed, and another. He shook three more out of his left hand, and drew a score or so out of his ears.

"Perhaps you would like something to drink?" said he, smilingly, to the Indian who spoke English. The savage looked at him suspiciously. "What'll you have?—Rum, brandy, gin, whisky, ale, porter, wine or cider?"

The Indian brightened up, and spoke to his fellows. They all preferred whisky.

Grignon asked the Indian to lend him a loose blanket which he wore. The Indian took it off doubtfully. Grignon shook it; a bottle rolled out. He shook it again: a glass fell out. He shook it a third time: nine more tumblers fell out. He shook it up again: a corkscrew tumbled down.

"Will you take it raw, or with water?" asked Grignon, as he proceeded to unscrew the cork. The Indian said nothing. "Isn't that good whisky?" asked Grignon, as he poured out a glass.

The Indian smelt it suspiciously; then he tasted it. The taste was enough; he drank it all off, smacked his lips, looked around triumphantly on his companions, and then held out his glass for more. At this all the other Indians, encouraged by this experiment, clamoured for some. Grignon poured away from his bottle. Each one drank, and wanted more. Grignon was quite willing to pour. He was not forgetful, however, of the duties of hospitality. He walked off to the Indians who were holding the horses, who had been watching the scene in stupefaction, and offered some to them. The smell of the whisky was enough for them. They drank, and wanted more. But Grignon shook his head.

"Not now," he said to the spokesman. "I'll give you a bottle apiece to carry home with you." And going up to the blanket, he shook out a dozen bottles of the same kind as the last, but, holding them up with the open mouth downward, not a drop fell upon the ground, which proved them empty, of course. But, lifting up the bottle which had already supplied more than its natural contents, it would appear, he proceeded to fill the dozen new ones from it.

The least impressionable of the tomahawkers were amazed at this display of the inexhaustible bottle and this new application of the principle of the Tantalus-cup.

The prospect of ever-flowing fire-water made the Indians feel in the jolliest mood conceivable.

"Before I give you any more," said he, "let me make you so that you will not get drunk."

He walked up to the first Indian, took his hands in each of his, and looked him steadfastly in the eyes for some time. Then he stroked his brows and left him; this he did to each. The Indians had all got over their suspicions, and merely expected that something good was coming. So they allowed him to do as he chose.

Grignon then stood off a little distance, and in a loud voice ordered them all to look at him. Whether they understood or not made no difference. They certainly all did look at him. I had seen plenty of experiments before in mesmerism and electro-biology, so that the present scene did not surprise me so much as it did my companions and the other Indians. Grignon simply stood at a distance, waving his arms at times, and giving words of command. Every word was obeyed. First they all began to dance. Then they all knelt down. Then they touched hands, and could not sever themselves from one another's contact. One Indian suddenly rushed wildly around, with the others all joined to him, trying to free themselves, but utterly unable, yelling and howling like wild beasts. At last, at a shout from Grignon, the charm was dispelled. They sprang back from one another and stood motionless, like so many statues. Suddenly they all began to shiver, as though they were suffering from intense cold. They gathered their blankets closely around them, their teeth chattering and every limb trembling. In an instant they were panting as though with extreme heat, drawing difficult breaths, gasping and flinging off those blankets which but a moment before they had wrapped so tightly about them. This then passed. They began to bark like dogs; they went down on all-fours, and evidently imagined that they were of the canine species. Then they tried to imitate the motion and croaking of frogs. After this they went through performances too numerous to mention. At

one time they became rigid, and arranged themselves like the stakes of a tent—heads together, feet outward. Then four of them knelt down and tried to run about with four others on their backs ; then they all jumped wildly up in the air, and began to flap their hands. At last they made a furious onset upon one another with fists, nails, and teeth, and if they had not left their weapons behind, they certainly would have done some frightful injury.

The two Indians who held the horses looked on in horror, bewildered and stupefied, not knowing what to do. They would have fled, in their fright, but dared not leave their companions behind. Grignon stood calm, with frowning brows, watching the uproar, himself the presiding spirit of the scene. My companions were confounded. Even some of them, as they afterwards told me, thought that Grignon was the devil.

At last Grignon gave a loud shout. The Indians fell flat on the ground. They lay there for some time as if dead. Then Grignon waved his arms, and they rose to their feet. All looked bewildered and frightened. With terrified glances they regarded first Grignon and then one another.

The Indian is superstitious, like all savages ; in fact, like all human beings. These men saw in Grignon a terrible demon, who could exert over them any power which he chose. He advanced towards them ; they recoiled. He walked up nearer ; they turned and ran towards their horses.

Grignon ran after them. Away they went. They urged their horses at the top of their speed ; but, fast as they went, a small, almost imperceptible pellet from the magician's hand preceded them, and suddenly turned to a globe of incandescence, visible, from its excessive brightness, even by daylight, which again burst into a shower of innumerable fiery serpents. These rushed hissing down upon the heads of the terrified crew, who lashed their ponies into a still madder gallop, and disappeared.

Grignon followed them but a short distance ; then he turned back and came into our enclosure.

"Gather up these bottles," said he. "Tackle up the cattle, and let us be marching." Instantly our men rose and

obeyed. Grignon then lay down in one of the waggons, utterly exhausted.

We travelled all that day and all the next night unmolested. Grignon slept long and soundly. After resting a long time, we pushed on our teams, so as to get as far beyond the hostile Indians as possible.

We saw nothing more of them.

"They won't dare to pursue us," said Grignon, confidently. "They'll go back and tell such a story as will be the wonder of the savages for many a long year."

Grignon was right. Not only did they not pursue us, but for all the remainder of that year, and for the next, no travellers on that route were molested.

"I don't see, said I, "how you managed to do those tricks on the open ground, without any table."

Grignon smiled. "Only clumsy performers use tables nowadays," said he. "I could have done far more wonderful things, but they would have been thrown away on those savages. They are not even as keen-witted as the Arabs whom Robert Houdin amazed by a simple entertainment of electrical and mechanical deceptions, by order of the French Government. I'll reserve my good tricks for San Francisco."





Part III.

MISCELLANEOUS MAGIC, &c,

COLOURED FLAMES.

THE following recipes for making coloured fires will, I am sure, be a boon to many of my readers, who may be of a pyrotechnic turn of mind.

BLUE.—Parts (by weight)—Burnt alum, 6 ; carbonate of copper, 6 ; sulphur, 8 ; chlorate of potash, 30.

RED.—Chlorate of potash, 30 ; sulphur, 8 ; carbonate of strontia (calcium), 12.

For Demon Torches—To an ounce of spirit of salt, add as much powdered chloride of calcium as will make a mixture of the consistency of thick mortar ; put the compound in a cup, and put it on a gridiron over a slow fire ; let it boil two hours or more, till nearly dry. (Note—The fumes are noxious.) After it is cool add about five ounces of pyroxylic spirit, and finally pour all into a white bottle, for use. For use, wind common cotton wick round a nail into a ball of two inches diameter, and fix on a torch, or where required. Pour as much of the mixture as will saturate the cotton, taking care to use as little of the sediment as possible. Light with a piece of lighted paper.

ORANGE.—Chalk, 16 ; sulphur, 7 ; chlorate of potash, 26.

PURPLE.—Chalk, 12 ; sulphur, 8 ; chlorate of potash, 30.

GREEN.—Boracic acid, 5 ; sulphur, 8 ; chlorate of potash,

YELLOW.—Dried soda, 12 ; sulphur, 8 ; chlorate of potash, 30.

The various materials must be powdered separately in a mortar, be thoroughly dry, and be mixed with the hand. Only make enough for one performance, as they are dangerous to keep, from their liability to spontaneous combustion.

LAUGHING GAS.

The above fanciful appellation has been given to nitrous oxide, from the very agreeable sensations excited by inhaling it. In its pure state it destroys animal life, but loses this noxious quality when inhaled, because it becomes blended with the atmospheric air which it meets in the lungs. This gas is made by putting three or four drachms of nitrate of ammonia, in crystals, into a small glass retort, which being held over a spirit lamp, the crystals will melt, and the gas be evolved.

Having thus produced the gas, it has to be passed into a large bladder, having a stop-cock ; and when you are desirous of exhibiting its effects, you cause the person who wishes to experience them, to first exhale the atmospheric air from the lungs, and then quickly placing the cock in his mouth, you turn it, and bid him inhale the gas. Immediately, a sense of extraordinary cheerfulness, fanciful flights of imagination, an uncontrollable propensity to laughter, and a consciousness of being capable of great muscular exertion, supervene. It does not operate in exactly the same manner on all persons ; but in most cases the sensations are agreeable, and have this important difference from those produced by wine or spirituous liquors, that they are not succeeded by any depression of mind.

THE MYSTERY OF VENTRILOQUISM.

The main secret of this surprising art simply consists in first making a strong deep inspiration, by which a considerable quantity of air is introduced into the lungs, to be afterwards acted upon by the flexible powers of the larynx, or cavity situated behind the tongue and the trachea, or wind-

pipe; thus prepared, the expiration should be slow and gradual. Any person, by practice, can therefore obtain more or less expertness in this exercise, in which, though not apparently, the voice is still modified by the mouth and tongue; and it is in the concealment of this aid that much of the perfection of ventriloquism lies. But the distinctive character of ventriloquism consists in its imitations being performed by the voice seeming to come from the stomach: hence its name, from *venter*, the stomach, and *loquor*, to speak. Although the voice does not actually come from that region, in order to enable the ventriloquist to utter sounds from the larynx, without moving the muscles of the face, he strengthens them by a powerful action of the abdominal muscles. Hence, he speaks by means of his stomach, although the throat is the real source from whence the sound proceeds. It should, however, be added that this speaking distinctly, without any movement of the lips at all, is the highest perfection of ventriloquism, and has but rarely been attained. Thus M. M. St. Gille and Louis Brabant, two celebrated French ventriloquists, appeared to be absolutely mute while exercising their art, and no change in their countenances could be discovered. It has lately been shown that some ventriloquists have acquired by practice the power of exercising the veil of the palate in such a manner that, by raising or depressing it, they dilate or contract the inner nostrils. If they are closely contracted the sound produced is weak, dull, and seems to be more or less distant; if, on the other hand, these cavities are widely dilated, the sound will be strengthened, the voice become loud, and apparently close to us. Another of the secrets of ventriloquism is the uncertainty with respect to the direction of sounds. Thus if we place a man and a child in the same angle of uncertainty, and the man speaks with the accent of the child, without any corresponding motion in his mouth or face, we shall necessarily believe that the voice comes from the child. In this case, were we directed to a statue as the source from which we were to expect sounds to issue, we should still be deceived, and refer the sound to the lifeless stone or marble. This illusion will be greatly assisted by the voice being totally different in tone and character from that of the man from whom it really comes. Thus we see how

easy is the deception when the sounds are required to proceed from any given objects, and are such as they actually yield. The ventriloquists of our time have carried their art still further : they have not only spoken by the muscles of the throat and the abdomen, without moving those of the face, but have so far overcome the uncertainty of sound as to become acquainted with the modifications of distance, obstruction, and other causes, so as to imitate them with the greatest accuracy. Thus each of these artistes have succeeded in carrying on a dialogue, and each with his own single voice has represented a scene apparently with several actors. These ventriloquists have likewise possessed such power over their faces and figures that, aided by rapid changes of dress, their personal identity has been scarcely recognised among the range of personations. Vocal imitations are much less striking and ingenious than the feats of ventriloquism. Extraordinary varieties of voice may be produced by speaking with a more acute or grave pitch than usual, and by different contractions of the mouth. Thus may be imitated the ginding of cutlery on a wheel, the sawing of wood, the frying of a pancake, the uncorking of a bottle, and the gurgling noise in emptying its contents.

THE TUNING FORK A FLUTE PLAYER.

Take a common tuning-fork, and on one of its branches fasten with sealing-wax a circular piece of card, of the size of a small wafer, or sufficient nearly to cover the aperture of a pipe, as the sliding of the upper end of a flute with the mouth stopped : it may be tuned in unison with the loaded tuning-fork (a C fork) by means of the moveable stopper or card, or the fork may be loaded till the unison is perfect. Then set the fork in vibration by a blow on the unloaded branch, and hold the card closely over the mouth of the pipe, when a note of surprising clearness and strength will be heard. Indeed, a flute may be made to "speak" perfectly well, by holding close to the opening a vibrating tuning-fork, while the fingering proper to the note of the fork is at the same time performed.

THE MYSTERY OF SECRET WRITING.

The art of communicating secret information by means of writing, which is intended to be illegible except by the person for whom it is destined, is very ancient. The ancients sometimes shaved the head of a slave, and wrote upon the skin with some indelible colouring matter, and then sent him, after his hair had been grown again, to the place of his destination. This is not, however, properly secret writing, but only a concealment of writing. Another kind, which corresponds better with the name, is the following, used by the ancients. They took a small stick, and wound around it bark or papyrus, upon which they wrote. The bark was then unrolled and sent to the correspondent, who was furnished with a stick of the same size. He wound the bark again round this, and thus was enabled to read what had been written.

This mode of concealment is evidently very imperfect. Cryptography properly consists in writing with signs, which are legible only to him for whom the writing is intended, or who has a key or explanation of the signs. The most simple method is to choose for every letter of the alphabet some sign, or only another letter. But this sort of cryptography (*chiffre*) is also easy to be deciphered without a key. Hence many illusions are used. No separation is made between the words, or signs of no meaning are inserted between those of real meaning. Various keys are also used according to rules before agreed upon. By this means the deciphering of the writing becomes difficult for a third person not initiated, but it is also extremely troublesome to the correspondents themselves, and a slight mistake often makes it illegible even to them.

Another mode of communicating intelligence secretly, viz., to agree upon some printed book, and mark the words out, is also troublesome, and not at all safe. The method of concealing the words which are to convey the information intended in matter of a very different character, in a long letter which the correspondent is enabled to read by applying

a paper to it, with holes corresponding to the places of the significant words, is attended with many disadvantages: the paper may be lost, the repetition of certain words may lead to a discovery, and the difficulty of connecting the important with the unimportant matter, so as to give to the whole the appearance of an ordinary letter, is considerable.

There are many kinds of sympathetic inks. They are so called because the writings or drawings made by them are illegible, till by the action of some chemical agents, such as light, heat, acids, or other substances, are brought in contact with them, when they appear. A weak sulphate of iron will be invisible in writing till washed over with a weak solution of prussiate of potass, which turns it of a beautiful blue. If we write with the nitro-muriate of gold, and afterwards brush the letters over with dilute muriate of tin, the writing will appear of a beautiful purple. If we write with a diluted solution of muriate of copper, and when dry present it to the fire, it will be of a yellow colour.

Chemistry was also in great request for secret writing, and various substances were found to afford a fluid which would leave no mark behind the pen, until some chemical agent were applied. For example, if a letter be written with a pen dipped in the juice of lemon, the words will be invisible until the paper is held before the fire. This is caused by the action of the heat. Again, if a solution of nitrate of iron be the fluid used, the writing cannot be seen until it is dipped into a solution of galls, or even into tea, which will act upon the iron, and become ink. It was found that if a plain sheet of paper were sent, and intercepted, the very fact of its being plain rendered it suspicious, and every means were used to render visible any writing that might be on it. A letter was therefore written with ordinary ink, on indifferent subjects, and between the lines the required information was added in some sympathetic ink. But writing with these or other sympathetic inks is unsafe, because the agents employed to render them visible are too generally known. Hence, the chiffré indechiffable, as it is called, has come very much into use, because it is easily applied, difficult to be deciphered, and the key may be preserved in the memory and easily

changed. It consists of a table in which the letters of the alphabet, or any other signs agreed upon, are arranged as follow :

z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	z	y	z	a
b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b
c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c
d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d
e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e
f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f
g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g
h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h
i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i
k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k
l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l
m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m
n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n
o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o
p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p
q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q
r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r
s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s
t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t
u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u
v	w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v
w	x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w
x	y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x
y	z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y
z	a	b	c	d	e	f	g	h	i	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z

Any word is now taken for a key. The word *Paris*, for example. This is a short word, and for the sake of secrecy it would be well to choose for the key some one or more words less striking. Suppose we wish to write in this cypher with this key the phrase, "We lost a battle," we must write *Paris* over the phrase, repeating it as often as is necessary, thus :

Pa risP a risPar
We lost a battle.

We now take cypher for *w*, the letter which we find in the square opposite *w* in the left margin column, and under *p* on the top, which is *m*. Instead of *e* we take the letter opposite *e*, and under *a*, which is *f*; for *l*, the letter opposite *e*, and under *z*, and so on.

Proceeding thus, we should obtain the following series of letters :

mf cxli b tkmimw

The person who receives the epistle writes the key over the letters

P a r i s P a r i s P a r
m f c x l i b t k m i m w

He now goes down in the perpendicular line, at the top of which is *p*, until he meets *m*, opposite to which, in the left marginal column, he finds *w*. Next, going in the line of *a* down to *f*, he finds, on the left, *e*. In the same way *r* gives *l*, *i* gives *o*, and so on. Or you may reverse the process; begin with *p*, in the left marginal column, and look along horizontally till you find *m*, over which, in the top line, you will find *w*. It is easily seen that the same letter is not always designated by the same cypher; thus *e* and *a* occur twice in the phrase selected, and they are designated respectively by the cyphers *f* and *w*, *b* and *k*. Thus the possibility of finding out the secret writing is almost impossible.

The key may be changed from time to time, and a different key may be used with each correspondent. The utmost accuracy is necessary, because one character accidentally omitted changes the whole cypher. The best way of determining the key word is to arrange that any word which occurs at a certain distance from the beginning or end shall be the key word—the tenth from the beginning, for example. The key word will thus change every time, and any combination of letters will make it. This will make it impossible to be guessed.

The easiest method of working this square is to cut a piece of thin wood like a carpenter's square, and by applying it to the alphabet the letter is at once seen in the angle. For example, supposing such a square to be applied so that one side is on the letter *p* at the top, and the other on the letter

w at the left hand, the letter *m* will be in the angle, so that the trouble of following the lines with the eye will be avoided.

Here is another specimen of secret writing.

A LOCK FOR MR. HOBBS TO PICK.

T:2 2irt(,)t:2 s2i(,)t:2 stirr6 s,6(,)
 irr2 86p : 2rs wr3t 76 : 1-0 93v3-2(,)
 T : it : 1-9 w:38: t5-29 t:23r : 1r ? 4-6(,)
 1-9 7192 t:23r vir329 .l4r325 s:32(:)
 3- t:2? 22- :2it:2-s 2fl2 ?16 s22
 S6?74!s 3- 5-2 .rl-9 tr3t: 84?75-2(:)
 76t 3- t:2 744, 40 744,s t:2r2 !32s
 1 ,26 34 r219 t:23r ?6st2r32s (.)
 T:2- !2t -4t o13t!2ss t4-52 19v1-82
 3ts s:!!4w v15-ts(,)4r s84002r 91r2
 5p4- t:2 71s2 40 3-4rl-82
 T4 r13s2 1 str58t5r2 40 92sp13r(!)
 T:45.: o44!s ?16 .3v2 t:2 w4r!9t t4 8:1-82(,)
 92s3- 1-9 pr4v392-82 1r2 t:2r2(,)
 :4w 7!3-929(,)w:4 1t 92it: 1!4-2
 T:23r 922p s3-30381-86 4w-(!)

HERE IS THE ANSWER.

The letters are represented by the figures and symbols below them. With this key the lock may be opened.

a b c d e f g h i j k l m n o u y
 1 7 8 9 2 0 . : 3 ; , ! ? - 4 5 6

The stops enclosed in parenthesis are used in their capacity of stops : thus, (,) (;) &c.

The earth, the sea, the starry sky,
 Are cyphers writ by hand divine,
 That hand which tuned their harmony,
 And bade their varied glories shine ;
 In them e'en heathen's eye may see
 Symbols in one grand Truth combine ;
 But in the book of books there lies
 A key to read their mysteries.

Then let not faithless tongue advance
 Its shallow vaunts, nor scoffer dare
 Upon the base of ignorance
 To raise a structure of despair!
 Though fools may give the world to chance
 Design and Providence are there :
 How blinded, who at death alone
 Their deep significancy own !

PROFESSOR HOFFMAN'S CYPHER PUZZLE.

EM qji ipizimqj uios ab qji siekm ab oysymkvif I I ofcoppO
 I gemK ab qji pirriS fydjoseO I o pemiop cirdimcomg ksan
 qji ksioQ vemkeR I jozemk ofcedoqic qji qjsami em bizays
 ab jer ram I riq ayq am o lepksenoki qa qji rjsemI ab qji
 lsaljiQ I omc I lorremk emqa emceO qjsaykj qji cipekjgbyp
 Zoppin ab dorjnisI I sirqic bas o rjasq qemi oq cipjE am jer
 xou.

HERE IS THE ANSWER.

The following is the key to the above puzzle :

Consonants—b c d f g h i k l m n p q r s t v w x z
 f d c b k i h g p n m l t s r q z x w v

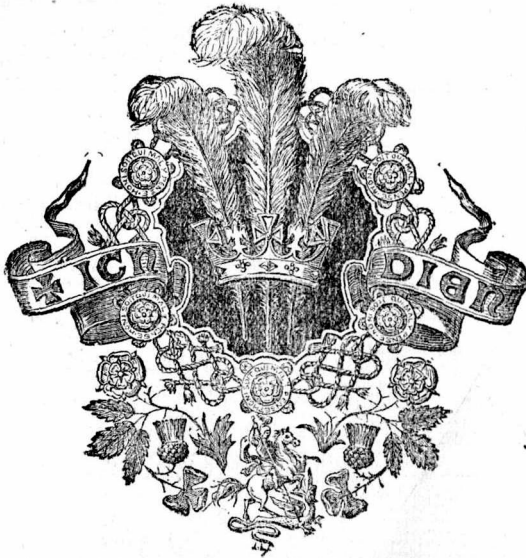
Vowels—a e i o u y
 o i e a y u

Now, if we take the letter *e* in the above puzzle, we shall see that it is represented as *i*, and *m* as *n*, which gives us the first word of the sentence—the top line of both consonants and vowels being represented by the letters underneath.

In the eleventh year of the reign of Aurungazebe, Abdalla, King of the lesser Bucharra, a lineal descendant from the great Zingis, having abdicated the throne in favour of his son, set out on a pilgrimage to the shrine of the Prophet, and, passing into India through the delightful Valley of Cashmere, rested for a short time at Delhi, on his way.

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