THE SECRETS OF

DAVID COPPERFIELD

FOR MAGICIANS ONLY

Ashley Jackson
NOTE TO THE READER

Please view the actual performance of each of these illusions before you read this book. My explanations are from watching the video cassettes taped from television called “15 Years of Magic” and “Niagara Falls Challenge”. Here is the list of illusions explained in this book:

Motorcycle Vanish & Reproduction
Walking Through A Mirror
Orient Express
Cocoon Metamorphosis
Ring On The Hourglass
Walking Through The Great Wall of China
The Death Saw
Vanishing The Statue Of Liberty
Flying
From the television special “Niagara Falls Challenge”

This illusion was the opener for DC’s Niagara Falls Special on television. Quite baffling and set to the fast-paced rock music of Van Halen. First I will explain the illusion and then go through a full explanation.

A Harley Davidson motorcycle is sitting on stage. Copperfield says a quick joke and the music hits. He stands still as assistants bring out a black leather jacket a motorcycle helmet. He puts on the jacket and the helmet. He then slides the helmet’s black face shield down completely covering his face.

He walks back in front of the stage curtain and pulls it back exposing a big steel crate big enough for the bike to fit in. He shows the audience that the crate is attached to chains from up above and hops onto the bike. He starts it up and slowly drives it into the steel crate. His assistants secure it in the crate with chains and at his command the bike, in the crate, is pulled way up high above the stage.

Copperfield yells “Everybody check his out” and the bike disintegrates into nothing. A second later the bike appears half way down the arena on a small platform in the crowd. The audience is delighted and give DC a thunderous applause.

To explain this illusion we need to understand that DC is switched and also the principle of “Black Art Magic”. When DC covers his face with the black face shield from the helmet, he does this for a very important reason. When he pulls the curtain back we apparently still see him there but it is not him. It’s a double dressed exactly the same. He goes behind the curtain and a switch is made out of side. We think we still see his hand holding the curtain but it is the double actually holding it.

The double takes on DC’s role for the rest of the time on stage. Meanwhile DC is quickly making his way backstage and through an underground tunnel (a normal thing in most arenas) all the way to the other platform in the middle of the crowd. He hops on a bike there and waits until it’s the right time, the bike obviously hidden under the platform.
Meanwhile back on stage DC’s double is in the crate and being pulled up high into the air. The background up that high is not the normal background down below on the stage. It is black and a light shines on the bike so you can see it. This is a perfect backdrop for the “Black Art” principle.

Black Art is basically used to vanish or produce items in magic. The logic being that anything black will not be seen by the audience if the background is black.

The bike disintegrates into nothing. Actually the bike has pyrotechnic devices attached to it and when ignited will produced fast burning sparks that will burn out instantly and leave only smoke. As the bike is ignited the black art principle takes effect. Black cloth falls over the bike at the same rate as the pyrotechnics burn. This is done with assistants high up above the stage. Now it appears as if the bike ignited and vanished but in reality it is still there attached to the chains it was fastened to. The crate’s other side collapses and falls. This is because if it were left there then the black art would be given away. Also note that you can no longer see through the front and back panels, meaning the smaller panels. This is not noticed by the audience because of the misdirection of the back side of the crate collapsing down. This is done deliberately to conceal the black art and the angles from the audience’s view.

As soon as it’s apparently vanished DC comes out of his platform on the other bike and the illusion is over. The crate and black art covered bike are still all there and will finally come down when the back curtain closes which is usually after a big illusion so the assistants can prepare the next one.
A lot of thought went into working out this illusion. As always I shall describe firstly the effect and then the method. A huge mirror is brought on stage and a spectator asked to inspect it. Introduced is a huge frame that will hold the mirror. The frame is tinted glass and there is a rectangle section missing in the middle so DC can walk through it. The mirror is slid into the glass frame and the audience can see the mirror through the frame still. A part of the mirror is still fully exposed where the cut out rectangle is in the frame. A piece of paper is placed over that section. Curtains are pulled down at the side of the frame and DC steps behind it. Amazingly the paper breaks as DC walks through the mirror. The paper is removed and the exposed middle section is still the mirror. Copperfield has now just walked through a solid glass mirror.

The explanation is both simple and complex. The mirror is a real mirror and is not gimmicked in any way. However the secret lies in the frame. The glass at the front of the frame is also a mirror, but it is tinted and has no back. You can see how reflective it is even before the real mirror is placed behind it. But that is not a complete solution.

When the real mirror slides into the frame is catches a black blind. The blind in theory is what makes the tinted mirror appear as if the real mirror is always behind it. The blind rolls up very small but it cut to the exact shape of the frame (complete with cut out rectangle). When the mirror slides into the frames the black blind rolls along with it, but in front of it. It catches onto the real mirror and slides along at the same rate the mirror is pushed in. The result is ingenious. It appears as if the mirror can really be seen through the glass frame and you can see the rectangle cut out as well showing you the real mirror and where DC will walk through.

The rectangle section is covered with paper and DC goes around to the back of the frame. The reason the curtains are raised on the sides of the frame is to not expose what DC will do next. The real mirror is now not seen at all by the audience so DC pulls a handle which swings the real mirror open just like a door. It is supported by a frame obviously so it can be moved quickly. Copperfield then puts his hand through the paper and follows with the rest of his body. The assistants hit a switch which returns the opened mirror door back to its original position. The mirror slides out and in turn the black blind slides back and DC has just walked through a mirror.
ORIGINAL MIRROR

BLACK BLIND IN THE MIDDLE

TINTED MIRROR WITH RECTANGLE CUT FROM CENTRE

FRONT

SIDE CURTAINS

ORIGINAL MIRROR IS NOW NOT SEEN BY AUDIENCE SO IT CAN SWING OPEN ON IT'S SUPPORT FRAME
The vanish of the Orient Express, perhaps one of DC's biggest and most mystifying illusions is truly a marvellous feat of perception and clever camera work. This huge illusion was done outside and not with a live audience but with randomly selected spectators that surround a huge train carriage of the infamous Orient Express. At DC's command a huge tarp like cloth is placed over the carriage and a few moments later it rises into the air with the carriage underneath, moves in the air slightly over the spectators and DC suddenly pulls the mighty tarp down which falls to the ground revealing a vanished Orient Express.

Let me take you through the illusion step by step for a full understanding. On film a full introduction is done showing the carriage and showing the spectators forming a giant circle around it and then holding hands together. This is so the viewer at home thinks there is no way of the carriage possible getting passed the randomly selected spectators. In actual fact each spectator is on DC's pay-roll and work for him, if not as spectators then as assistants or people behind the scenes during his regular shows.

When Copperfield walks through the carriage and tells you the audience watching on television that “this shot will not cut away, there are no camera tricks or editing” he is not lying but there is a slight camera trick to enhance this illusion. The camera never cuts away or is edited in any way but the camera never goes beyond a certain angle, but more of that explanation very soon.

He exits the carriage and runs down to begin the process of pulling ropes down from the top of the carriage, which causes the tarp to cover the train. He then tells his assistants to pull all the ropes down so that the carriage is covered completely by the huge cloth tarp. If one looks closely you can see that only one side is covered. The side that is hidden from the camera view is not covered at all. In fact the cover is made specifically so it covers the top, front and the side viewed by the camera but not the side or back of the carriage out of camera view. This is the major deception in the illusion. The viewer simply expects that it is all really covered.

Before the raising of the tarp we should consider the set up of the background and lighting to get a full understanding of the situation. The illusion is outside. The ground is concrete and there are no trap doors. The carriage sits on train...
tracks just long enough to be pulled out of view. The sky is pitch black because it is night-time. There are several floodlights shining at the carriage. They are extremely bright and all that is behind them is total pitch-black darkness. This is extremely important. This illusion cannot be performed in daylight.

Although there are no “camera tricks” involved the illusion requires the camera to only show you so much so in reality there is a camera trick or deception in some form. DC raises his arm and it signals the tarp to be raised high above the ground apparently with the carriage underneath. In actual fact the carriage is already gone. As soon the tarp was lowered the train was towed out by a truck behind the view of the one-sided tarp. This is done very quickly in around 15 seconds and the carriage is taken between two floodlights at the back, beyond camera view, and is placed in the darkness. The tarp is raised by a crane. The tarp is in fact attached to a black frame totally invisible in the darkness. When DC raises his arm the crane raises the tarp. Now here is where the camera is critical in convincing the television audience that all is as it seems. The camera only ever shows you one side and the front of the carriage. It never shows you the back or the other side which has no tarp covering it.

Now all that is left is for DC to pull the cloth tarp down which is detached from its black frame by the crane and the illusion is done. The vanish of the Orient Express, although seems simple after being explained, is truly a brilliant illusion and many years of thought went into it. It truly deserves admirable respect for Copperfield and his team of wonderful staff.
In this illusion David takes the version of Houdini’s infamous metamorphosis and adds on his own little twist. To watch this performed is mind blowing and the timing involved in just incredible to understand let alone watching it. I will describe the illusion and then try to explain the methods involved.

Copperfield is on a thing table like structure and a platform slowly comes down next to him. It has a female assistant in on it. It keeps coming down until it is roughly the same level as DC’s tabletop. A passionate dance between the two happens. The platform that came down is draped with loose sheets and the centre of it opens and closes much like a cocoon, hence the name of the illusion. The girl ties DC in the cocoon and the doors are shut. DC’s hand rises out of the top of the cocoon showing you at least one hand is free, but then his hand goes out of view again. The girl stands on the tabletop while the cocoon rises back into the air. She holds a sheet up in front of herself and a spilt second later the sheet is thrown away but DC is now where she was. The cocoon opens up and the girl is now seen in it. The platform lowers again and they do a small dance routine again.

This illusion requires a couple of important things to pull it off. Firstly the use of identical female twins and secondly the use of black art (for a better description of “Black Art” see the explanation for the “Motorcycle Vanish & Reproduction”).
When the illusion starts one twin is in the cocoon while the other is hidden behind the cocoon. DC is on his thin tabletop. The cocoon is lowered onto the table and they do their dance. DC is tied in very loosely with pieces of material and the cocoon is closed. He makes his way out the back of it and behind the table where he is hidden by black art. Meaning a cloth is hanging behind the table and it is black, the same as the background. As he does this the other twin makes her way into the cocoon. There she holds up her hand but she has a small piece of a shirt the same as DC’s to make it look like it’s his hand. As the platform rises the hand falls back into the cocoon. The twin then hides the DC shirt piece and loosely puts her hands in the already tied binds from before.

While this is all happening the original twin raises a sheet to about chest height. Behind the sheet DC crawls up and slides under her legs and is now bobbing down just below the sheet level. As she quickly raises it he stands as she jumps back behind the black art. And in an instant DC is now seen to have swapped places. The timing for this must have taken a lot of hard work because it is done all in a split second.

When the cocoon opens it is now the other twin. They are identical of course and no one in the audience knows any better. Truly a magnificent revamped version of an old classic, of course which David’s own little twist to make it unique.
From the television special “Niagara Falls Challenge”

Although this is not a big prop stage illusion it is still very worthy of being included and is truly a masterpiece in its own right. As always I will explain the performance and then take you through an explanation.

A random lady is selected from the audience and asked to come up on stage. DC asks if he can borrow her finger ring and he promises to return it. She is given an hourglass (or egg timer) and asked to inspect it. DC then tells her he is going to make it disappear and reappear on the hourglass.

A ring box is introduced and a piece of thin ribbon. The ring is threaded onto the ribbon so it cannot escape and then placed in the ring box. The hourglass is covered with a cloth. DC then asks the lady to hold one side of the ribbon while he holds the other. The pull it out and there is no ring. Copperfield opens the ring box and still no ring is there. He removes the cloth and holds up the hourglass. To the audience's amazement it has not appeared on top of the hourglass but on the hourglass, stuck in between the two glass chambers that the sands flow through.

Another incredible illusion here that seems to create the impossible. Here is how it works. First lets examine the vanish of the ring. A thin ribbon is really threaded between the opening of the ring. There is no trickery or special props other than slick sleight of hand work. As DC puts the threaded ring into the ring box he pulls a tiny bit of slack underneath. He places the slack of ribbon into where the ring goes and temporarily puts the ring in the box as he turns out of view from the audience for a brief moment. Here is where the vanish takes place. As he turns from the audience he holds onto the ring and puts it in his fingertips and slides it back out to release it from the ribbon. To prevent the actual ribbon from popping out he holds it in the box opening (where the ring was supposed to go) while his other hand takes possession of the ring. It is very evident that the ring is in his hand due to the curling of his fingers. A very common technique among magicians.

Now what does he do with the ring. The audience thinks it's in the box but DC has it palmed in his hand. He brings the hand with the ring very naturally to the back of the tabletop. From there he drops it into a secret compartment into the actual table. The table is thick and is hollow. Just enough room for a hidden assistant. The assistant takes possession of the ring and is ready to put it on the hourglass. The hourglass is a duplicate of the other hourglass.
sitting in the audience’s viewpoint. But it detaches in the middle. Just enough to slip the ring onto the hourglass.

Now how does the assistant swap the two hourglasses. Very simply. Notice that DC has a small cloth on the table and it is laid out flat. This is to conceal a hidden well in the table. As DC goes to put the cloth over the hourglass a switch is made. The assistant slides the real hourglass into the hollow well and quickly switches it for the rigged hourglass with the ring on it. The illusion is done. All that is left is a good presentation and smashing the revealed hourglass to enhance the believability of the effect.
Let's start with the description of this fantastic illusion and then I shall explain the methods. DC has a homing device attached to him and it is monitored on a computer screen through the entire illusion. A cabinet is pushed against the wall. It is transparent so that when a light shines into it you can see DC’s shadow. DC goes into the cabinet and the light inside is turned on so we can see his shadow. The cabinet is sealed on all sides so no one can see anything but his shadow. Slowly we see the shadow go into the wall and completely disappear. His beacon response on the screen has vanished also.

The camera is all one shot and it rotates over to the other side of the wall on a big boom-stand. On the other side we see another cabinet with the sides down off it so it is exposed. On the screen we see DC’s beacon lightly beginning to start again. Two assistants bring a cloth up against the wall and we see DC’s upper body shape coming through the wall and then it disappears. The sides are put on the cabinet and the light turned on. Then DC’s shadow comes out of the wall and he rips the side off to a big applause.

The solution is actually very clever and uses a well-known prop most modern day illusionists use. The beacon is of course fake and controlled by computer. The shadow of DC is really Copperfield. When his shadow appears to be going into the wall he is actually sliding across the wall closer to the light projector causing his shadow to appear as if it is vanishing into the wall. From there DC quickly slides into the hollow aluminium base where he hides out of sight.

The base on the other side of the wall is in actual fact the same original base that DC is concealed in. It is simply wheeled to the other side of the wall. There are many passages in the Great Wall that take you from one side to the other and the base is simply pushed around out of camera view to the other side.

On the other side of the wall it appears as if DC is coming out of the wall and pushing into a cloth held by his assistants. He then goes back into the wall. If you look closely at the assistants you will see it is actually their hands pushing behind the cloth. One arm each makes it looks like DC’s hands pushing the cloth forward. But there arms are crossed over each other to make the hands look exactly right, otherwise it would look odd having a “left hand look” to where a right hand should be. The action of crossing there arms forces a rod
up which pushes “face shaped object” in order to give the impression of DC’s face coming through as well (see picture). The rod and fake face are permanently attached behind the cloth and lay pretty flat when not being worked.

When the sides are put on the cabinet DC is ready to quickly get out of the base where he is hiding and as soon as the projector light goes off he stands up and rips back the side. Another ingenious illusion by a master of magic.
The death saw is an incredible illusion. Copperfield is placed in a box on a table. The box is closed around him only exposing his head and wrists. His wrists are chained up and a timer is set for sixty seconds. The big saw above him starts. He now has 60 seconds to make an escape or be sliced in two. He gets the chain off his wrist and manages to undo the box. But he is still held down by solid steel strips covering parts of his body. Only a few seconds left. Too late. The saw comes down and saws him in half. Assistants come out and pull the table, now in two big pieces, apart to show the audience that in fact he is split in two. He moves his feet to show that all is real. With a magic wave he points to the timer and now it goes backwards in time as a full reverse recreation happens. The saw goes back up. The table parts move back together. The box reassembles and it’s all over. He steps out of the box to show that he is back in one piece.
To explain this illusion I will first start off by showing you this sketch which shows you what the audience views.

Now take a look at this sketch to see a side on view.
Now let’s look at the secret behind the Death Saw. Study the next sketch.

The Death Saw is accomplished using Copperfield for the top half and an assistant roughly his size for the bottom half. The table they are on is hollowed out aluminium and fibreglass. When DC goes into the box and is briefly out of view from the audience, that is because he needs to get in position as well as his accomplice. The handcuff and chains are not important as they are all fixed to open whenever DC wants them to. The box is open to show DC is in fact there but at this point he has already moved into the position in the above sketch. His white shirt not tucked in covers the part where the gap between the two of them is. The saw comes down and cuts through nothing because the table is pre-cut. The tables are pulled apart by the assistants but we never actually get a clear view of the ends. DC then reverses everything in time and the tables moving back together is done hydraulically. The box comes back up and DC steps out as his accomplice lays flat in the now empty space where DC was. The box can now be undone to make the table appear flat. Truly an ingenious illusion and it proves why Copperfield and his staff are so great at what they do.
From the television special “The Statue of Liberty Disappears”  
And “15 Years of Magic” Special

On live television a group of spectators are situated in front of two huge pillars and in between the pillars the Statue of Liberty is clearly visible. DC explains that a large cloth will be raised between the pillars and the Statue will vanish. On a computer screen he shows the statue has a homing beacon flashing showing the television audience the location of the statue at all time. It is a flashing dot of the screen. Copperfield orders the curtain raised and now the statue is out of view of the audience. The beacon on the computer is flashing but quickly begins to fade until it no longer flashes. DC orders the curtain to be dropped and the statue has vanished. Even the huge skylights, which were previously around the statue, are still there to prove the statue has really gone. Copperfield orders the curtain to be raised and the beacon starts slowly flashing again. He orders the curtain to be lowered and the statue is back again. The spectators there live are truly blown away and can’t believe what they just witnessed first hand.

The solution is very simple and logical but still baffling to a non-magician. If you look carefully at the diagrams included it will explain all. The stage, including the spectators, camera and pillars are on a rotating platform. So when the cloth is raised the platform moves slowly in order to not arouse suspicion by moving fast. Also notice this is done at night time when it is very dark so the spectators do not even know they are actually moving because nothing in the background changes. So when the curtain is dropped all that has happened is that the platform has rotated enough for the statue to be hidden by the view of a pillar. The lights shining in the same spot that were around the statue are just duplicates while the original lights are switched off momentarily.
The homing beacon is nothing but an electronic illusion and is not attached to the statue in any way. When the curtain is raised again the platform rotates back to the original position and the lights are reversed to the original set up. Please study the diagrams as they will give you a clear picture of the method for vanishing the Statue of Liberty.
I have saved the best for last. I am still blown away every time I watch this illusion and I’m sure I always will love it. David glides through the air all over the stage. One might think he is using wires but they are not to be seen. In order to prove this he passes through big steel hoops rotated by his assistants. He then is sealed into a big glass structure and a lid placed on top of it. Still he floats in the air. He goes back to the ground and picks up a lady spectator and holds her in his arms. They fly high up together and glide across the stage. She is placed back on the ground and DC rises again. An eagle flies onto the stage and onto DC’s arm and he flies behind the side curtains.

The explanation for “Flying” is no miracle or supernatural act. But the miracle lies in the way of his performance. He flies using wires. Actually very small thin wires very similar to piano wires. Examine the diagrams included and you will see what the apparatus looks like. The reason so many wires is that the wires are so thin and a lot are needed to fully support his weight. The lighting and background of this illusion are of extreme importance. The blue light everywhere hides the visibility of the wires. It is dark on stage but the presence of lots of blue lighting gives off enough light to see everything but still not see the wires. The background is also important. There are clouds all around the back and supported on thin rods. This also helps disguise the wires just in case a slight exposure occurs, it will be hard to see amongst the thin rods in the background.
The diagrams included are actually from the United States Patent Office. It is patent number 5354238 and was invented by John Gaughan (a well known illusion designer who has helped Copperfield and other illusionists for many years). I have only included two drawings from the patent as I think it describes the apparatus without going into every mechanical part of each nut and bolt. The frame that supports the wires is high up above the top stage curtains and completely out of sight from the spectators. It is also protected with the “Black Art” principle partially. It is black and is high up above the stage where everything is pitch black and very dark. The committee of spectators invited on stage to witness the illusion first hand may or may not be in on it with Copperfield. It depends if they can actually see the wires on stage. On camera and to the main audience the wires are totally unseen. The spectator DC flies with is obviously in on the illusion and is on DC’s payroll.
An apparatus for use in performing levitation type illusions in which the performer appears to be raised and moved about in apparent defiance of gravity. The performer is safely supported within a novel harness assembly which, in turn, is supported by a pair of wire arrays made up of a plurality of fine wires which are substantially invisible to the audience. Each of the support wires is spring loaded so as to evenly distribute the weight of the performer among the support wires which make up the arrays. The harness assembly is connected to the wire arrays in a manner that permits several degrees of movement by the performer during lifting and movement relative to the stage so that the movements by the performer appear smooth, natural and graceful.

The amount of practice required to make DC fly would have taken years to fully master, both for DC and his technical crew operating the device. As DC somersaults he actually gives it all away to some people. It is the same action of rotation that athletic gymnasts use when they are harnessed into the gymnastic apparatus that helps you somersault by supporting your bodyweight partially.

Copperfield exhibits several deceptions to make us think he is not using wires. The first being the steel hoops. Upon watching this in slow motion on videotape I noticed that the rings never actually go above DC’s head. The constant movement of the rings in a 3D motion looks like it is passing over
DC’s head to the audience. When DC goes into the glass box and the lid is placed on top it is the final convincing aspect to the audience. The lid is actually slid perpendicularly so it is in between the wires and then placed horizontally onto the top of the glass box. DC still floats in the box and this is easily explained. Upon closer observation you can actually see the box lid is narrower than the box (see glass box diagram). This allows the wires to still get through so he can float. The lid id removed in a similar manner to how it was placed on.

The rest is pretty self-explanatory. He takes a lady for a fly but she works for him so she isn’t a random spectator. The finale with the eagle flying to David’s arm would have been a bit tricky. DC must hold his arm out wide so the eagle has a clear flight path to his arm. Also consider an eagle has very sharp eyesight and would definitely be able to see the wires even if we cannot. Flying is still perhaps Copperfield’s most famous and brilliant illusion.