

SOME PEOPLE'S LIVES ARE FULL OF DRAMA. THEY PASS THROUGH THE WORLD LIKE A SHOOTING STAR, LEAVING A TRAIL OF LIGHT BEHIND THEM. ONE SUCH PERSON – A PIONEER IN VERY DIFFERENT FIELDS AND A FREE SPIRIT – WAS

HEDY LAMARR.



HI! I'M HEDY, HEDY LAMARR... GUESS WHAT I DO!

FRANCE



I'M A MOVIE STAR... AND NOT JUST ANY OLD MOVIE STAR!

I'M FAMOUS (AMONG OTHER THINGS) FOR HAVING BEEN "THE MOST BEAUTIFUL WOMAN IN THE HISTORY OF THE MOVIES".

YOU THINK THAT'S A BIG DEAL? WELL, I'VE DONE MUCH MORE INTERESTING THINGS THAN THAT... BUT LET'S START AT THE BEGINNING!



MY REAL NAME WAS HEDWIG EVA MARIA KIESLER AND I WAS BORN IN VIENNA ON THE 9TH OF NOVEMBER 1914. MORE THAN 100 YEARS AGO! DO YOU KNOW WHAT'S CELEBRATED ON THAT DATE? IT'S **INTERNATIONAL INVENTOR'S DAY** AND THE DATE WAS CHOSEN IN MY HONOUR... AND NOT BECAUSE I WAS BEAUTIFUL OR AN ACTRESS!

EVER SINCE I WAS LITTLE I HAD TWO GREAT PASSIONS: **ENGINEERING AND THE MOVIES.**



MOVIES!

ENGINEERING!

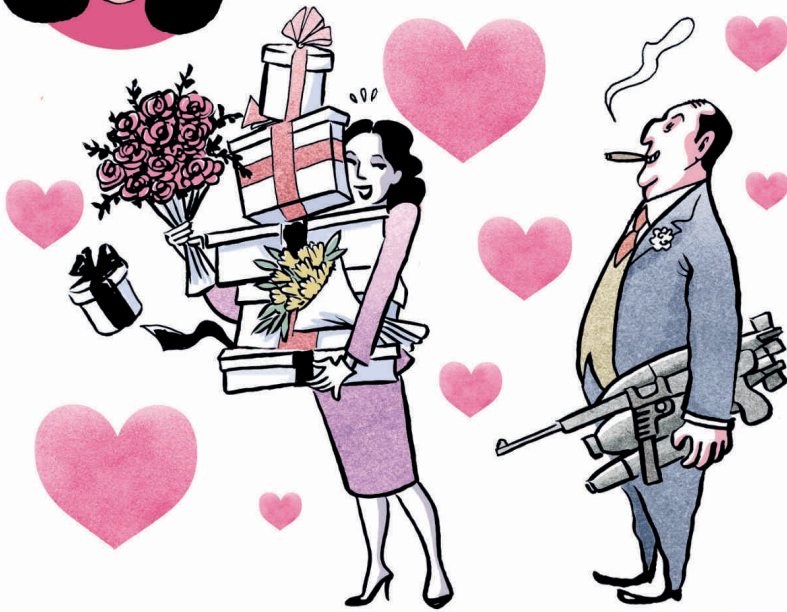
ENGINEERING!

MOVIES!





WHEN I WAS 15, I WENT TO GERMANY AND BECAME A MOVIE ACTRESS, BUT MY PARENTS WEREN'T SO KEEN. I MET AN OLDER MAN, FRIEDRICH MANDL, A RICH ARMS MANUFACTURER WHO WAS ALWAYS SENDING ME GIFTS AND FLOWERS... AND I MARRIED HIM.



I THINK I'M MAKING A BIG MISTAKE...

I HAD TO ACCOMPANY HIM WHENEVER HE SOCIALIZED WITH HIS BUSINESS PARTNERS... THEY WERE ALWAYS GOING ON ABOUT HOW DIFFICULT IT WAS TO GUIDE A TORPEDO WITHOUT THE ENEMY INTERCEPTING IT.



BLAH, BLAH

BLAH, BLAH

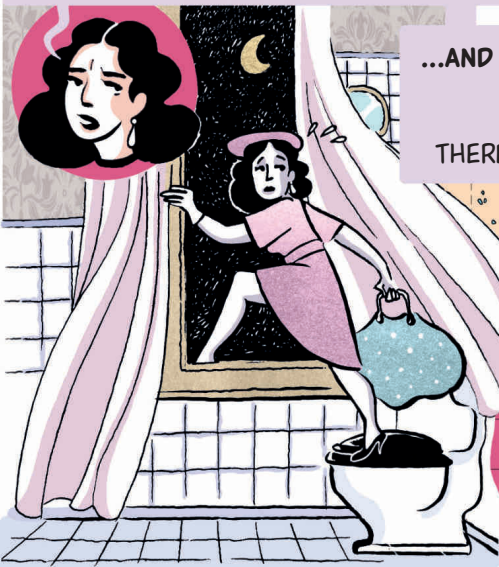
BLAH, BLAH



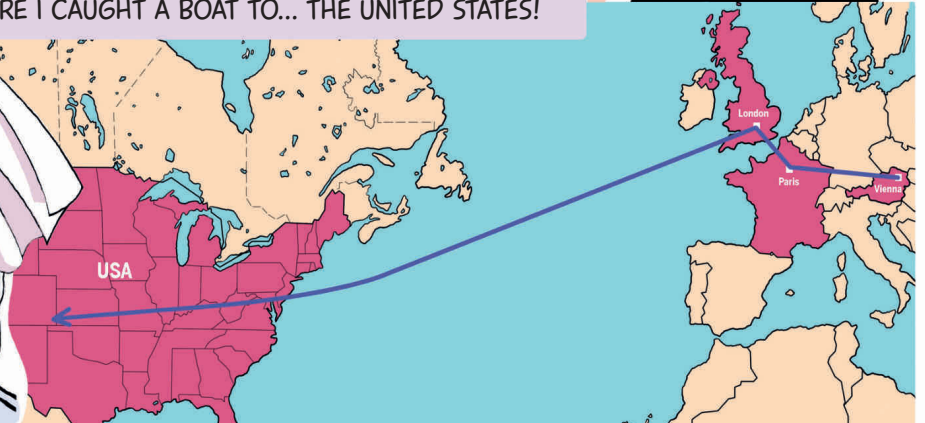
I LISTENED, SMILED AND ASKED THEM QUESTIONS. I WAS REALLY INTERESTED - BUT NOT BECAUSE I WAS INTO WAR. IT WAS THE ENGINEERING THAT FASCINATED ME...



...SO I LEARNED ALL SORTS OF THINGS. I LIVED A LIFE OF LUXURY BUT MY HUSBAND WANTED TO KEEP ME ALL TO HIMSELF, AND I'M MY OWN BOSS! SO ONE DAY I GRABBED A LOAD OF JEWELS...



...AND I CLIMBED OUT OF THE BATHROOM WINDOW! I WENT FROM VIENNA TO PARIS BY CAR, THEN FROM PARIS TO LONDON. THERE I CAUGHT A BOAT TO... THE UNITED STATES!



ON THE BOAT TO THE STATES, I MET A FELLOW PASSENGER: A CERTAIN MR MAYER, OWNER OF METRO GOLDWYN MAYER.

HE HIRED ME AS AN ACTRESS, OPENING THE DOORS OF HOLLYWOOD FOR ME. I WENT ON TO STAR IN LOTS OF FILMS...

...GOOD AND BAD... MAYBE YOUR GRANDPARENTS REMEMBER *SAMSON AND DELILAH*. IT WAS QUITE A HIT!

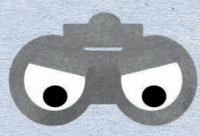
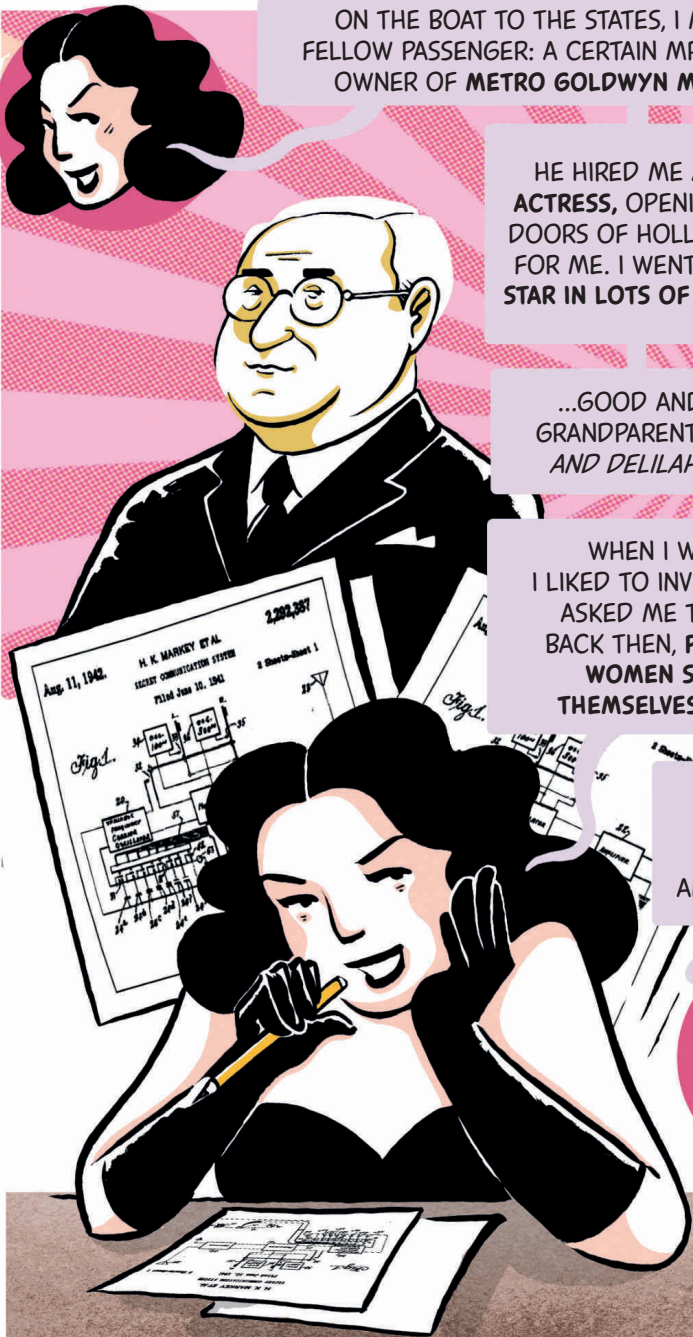
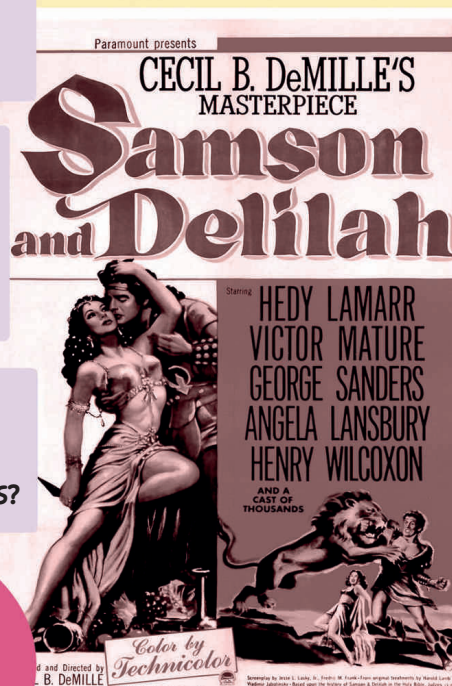
WHEN I WASN'T SHOOTING, I LIKED TO INVENT THINGS, BUT THEY ASKED ME TO KEEP IT SECRET... BACK THEN, PEOPLE DIDN'T THINK WOMEN SHOULD DEDICATE THEMSELVES TO ENGINEERING...

...THEY SAID IT WAS "MEN'S BUSINESS". HAVE YOU EVER HEARD ANYTHING SO RIDICULOUS?

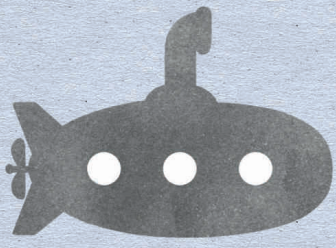
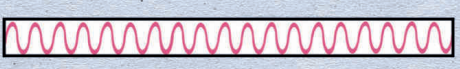
THEN THE USA ENTERED THE SECOND WORLD WAR, AND I WANTED TO HELP THE COUNTRY THAT HAD TAKEN ME IN.

YOU'LL PROBABLY REMEMBER THAT MY HUSBAND'S PARTNERS USED TO TALK ABOUT HOW DIFFICULT IT WAS TO GUIDE TORPEDOES WITHOUT THE ENEMY INTERCEPTING THEM.

TORPEDOES ARE GUIDED USING RADIO WAVES THAT TRAVEL AT A GIVEN FREQUENCY. AND IF THE ENEMY FINDS THE FREQUENCY WE USE TO GUIDE THE TORPEDO, THEN IT'S GAME OVER!



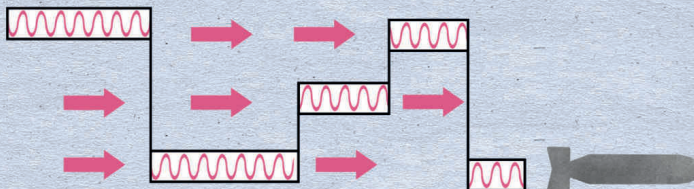
HAH! GOTCHA!



I THOUGHT OF A WAY OF DEALING WITH THAT AND A FRIEND, GEORGE ANTHEIL, A COMPOSER, HELPED ME TO WORK OUT THE DETAILS.



THE IDEA WAS THAT BOTH THE TORPEDO AND THE "REMOTE CONTROL" WOULD REGULARLY CHANGE FREQUENCY AT THE SAME TIME.



MAYBE IT'S EASIER TO EXPLAIN WITH AN EXAMPLE.

IMAGINE YOU WANT TO TALK TO A FRIEND AND YOU DON'T WANT ANYONE ELSE TO UNDERSTAND WHAT YOU'RE SAYING. IF SOMEONE LISTENS TO YOU AND YOU ARE SPEAKING ENGLISH...



...THEY'LL UNDERSTAND YOU. BUT IF YOU AGREE TO SPEAK SPANISH FOR 5 SECONDS, THEN FRENCH FOR 6 SECONDS, THEN RUSSIAN FOR 3 SECONDS... THE EAVESDROPPER WON'T BE ABLE TO TUNE IN TO ALL THOSE DIFFERENT LANGUAGES.



GEORGE AND ME INVENTED A SYSTEM LIKE THAT AND IT'S CALLED:

WE PROPOSED IT TO THE US GOVERNMENT BUT THEY DIDN'T SHOW MUCH INTEREST. BACK THEN IT WAS A BIT COMPLICATED TO ACTUALLY MAKE.

FREQUENCY-HOPPING SPREAD SPECTRUM.



IT WOULD BE ANOTHER 20 YEARS BEFORE SOMEBODY TOOK MY IDEA AND STARTED TO USE IT...



BECAUSE MOBILE PHONES, WIFI, BLUETOOTH AND LOTS OF OTHER THINGS ARE BASED ON THE IDEA THAT ME AND MY FRIEND GEORGE CAME UP WITH.

...AND IT WOULD BE A LOOOONG TIME BEFORE PEOPLE RECOGNIZED THAT MY IDEA WAS TRULY REVOLUTIONARY.



THAT'S WHY THEY CALL ME THE GRANDMOTHER OF WIFI... BUT HAVE YOU EVER SEEN SUCH A GLAMOROUS GRANNY?

