

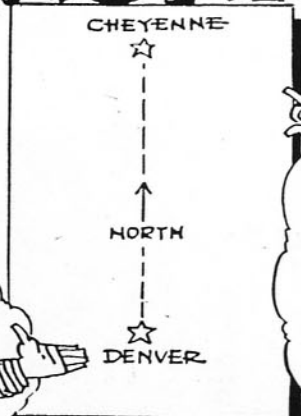
ACE McCOY

SIMPLIFIED AVIGATION



THE MOST DIFFICULT STUNT IN THE BOOK IS - TO FLY IN A STRAIGHT LINE - FROM ONE PLACE TO ANOTHER.

FOR INSTANCE HERE IS DENVER

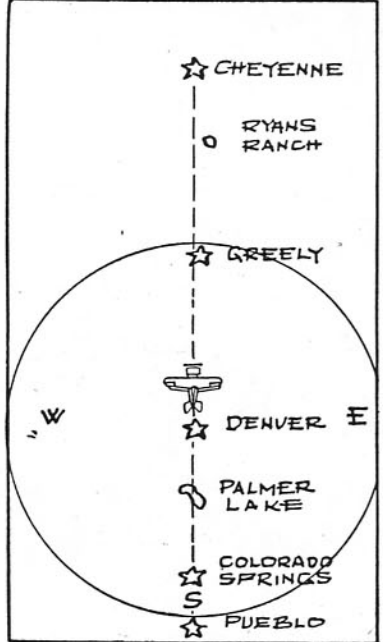


AND WAY UP YONDER - 200 MILES DUE NORTH IS CHEYENNE WYOMING WE ARE IN DENVER AND MUST FLY TO CHEYENNE

OUR SHIP HAS A CRUISING SPEED OF ONE HUNDRED MILES PER HOUR SO WE SWING A HUNDRED MILE CIRCLE AROUND DENVER

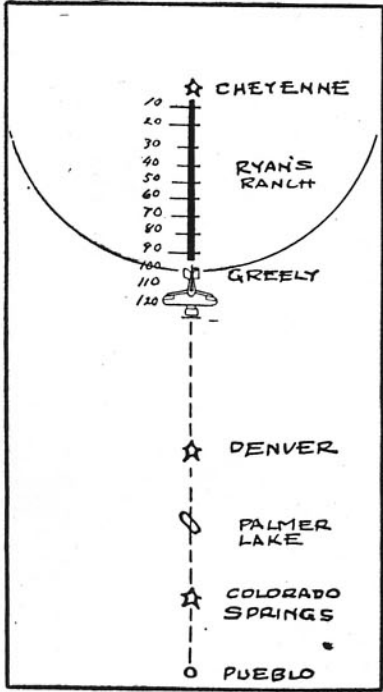
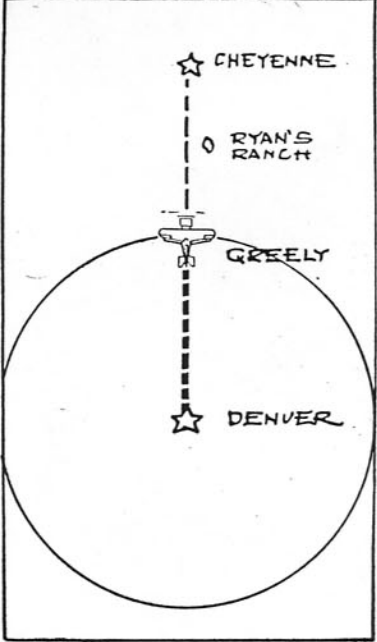
WE CAN FLY ANYWHERE WITHIN THAT HUNDRED MILE RADIUS IN ONE HOUR

PROVIDING THERE IS NO WIND



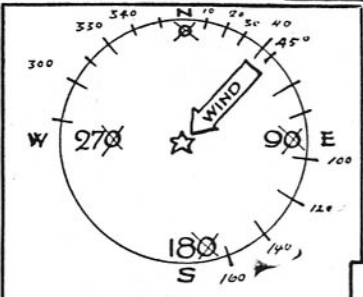
SO - AT 10 O'CLOCK A.M., WE TAKE OFF AT DENVER - AT 11 O'CLOCK WE FLY OVER GREELY WHICH WE KNOW IS 100 MILES NORTH OF DENVER WE HAVE BEEN FLYING ONE HOUR AND HAVE COME ONE HUNDRED MILES, OR HALF THE DISTANCE TO CHEYENNE

UP TO NOW WITH NO WIND - WE HAVE "MADE GOOD" OUR COURSE IN ANOTHER HOUR OR AT 12 O'CLOCK - WE SHOULD BE IN CHEYENNE - AT 11:30 WE SHOULD PASS RYAN'S RANCH THAT IS DEAD RECKONING



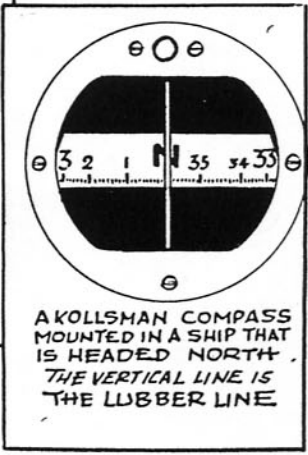
NOW IT IS ONE O'CLOCK WE ARE UP IN CHEYENNE AND WANT TO FLY BACK TO DENVER - A WIND HAS RISEN OUT OF DUE NORTH - THE VELOCITY OF THIS WIND IS TWENTY MILES PER HOUR - THIS TAIL WIND INCREASES OUR GROUND SPEED 20 MILES PER HOUR - OR THE CRUISING SPEED OF THE SHIP - PLUS THE VELOCITY OF THE WIND

IF FLYING DEAD INTO THE WIND - WE SUBTRACT THE WIND VELOCITY FROM THE CRUISING SPEED OF THE SHIP - IN THIS CASE IT WOULD BE 100 M.P.H. MINUS 20 M.P.H. (WIND) WHICH IS 80 M.P.H. GROUND SPEED



IT IS EASY TO ADD TAILWINDS OR SUBTRACT NOSEWINDS BUT A SIDE WIND TENDS TO SWEEP US OFF THE COURSE - SO WE MUST "AVIGATE" IN ORDER TO FLY IN A STRAIGHT LINE. SEE NEXT MONTH'S LESSON

BECAUSE OF GREAT SPEED ATTAINED BY THE AIRPLANE PILOTS ARE FORCED TO MAKE USE OF ALL DEGREES OF THE COMPASS - INSTEAD OF REFERRING TO THE CARDINAL POINTS AS NORTH, EAST, SOUTH AND WEST. HERE-AFTER WE WILL CALL THEM 0°, 90°, 180° AND 270°. IN ORDER TO PRINT THE NUMBERS LARGER ON THE COMPASS - WE OMIT ALL THE ZEROS - THEREFORE - SOUTH, 18 - WEST 27, ETC.



A KOLLSMAN COMPASS MOUNTED IN A SHIP THAT IS HEADED NORTH - THE VERTICAL LINE IS THE LUBBER LINE