BRAKES THAT HOLD MORE TO BE DESIRED THAN A GOOD ENGINE

Because You Can Start Something That Perhaps You Cannot Finish if Your Car Won't Retard.

Better have good brakes on your car than a fire engine, if you have to choose between the two. Brakes are the best form of accident insurance you can have. This indicates the relative importance of the two car features. You might have the highest type of engine, with unlimited power under the hood, but if you haven't also some means of curbing your high stepper and tethering it at will, you are in for it. "Whoa!" won't stop it, either. You might better be driving an untamed bronco of the plains. The engine will get you there, it is true, but if there be no means of stopping you may go too eternally far.

The average car has two sets of brakes—emphasizing the importance—and occasionally more. The emergency, or hand, brake consists of a brake band operating within a drum on each rear wheel, connected by rods and levers to the hand lever, which has a ratchet and pawl so that it may be locked in position. This brake primarily is to hold the car when standing, and secondarily, to use in running if the other brake gives way, or for alternating on long hills.

The Foot Brake.

The foot brake, called running or service brake, is operated by a pedal, with a spring to release it when pressure on the pedal is removed, and is connected by other rods and levers to brake bands operating on the outside of the rear wheel drums, or occasionally upon a separate drum on the propeller shaft. The latter gives greater braking power, because of the rear axle gearing leverage back of the brake, and the second drum helps prevent overheating on long hills. But this type brake does put a severe strain on the rear axle gears, with wear.

Both brakes should be kept in such condition that either will stop the car quickly. Do not let one set remain out of order just because you know the other is all right. The other might go bad just when needed.

The two brake bands in each set should hold with equal force, or one wheel will slip. To insure it, the pedal or lever linkage perates an equalizing bar, with other linkage to each band. With the bar straight across the car the braking force should be equal on each band.

Brake bands are lined with non-burning friction material, usually an asbestos fabric, fastened to the steel bands by copper rivets, the heads of which are countersunk deep into the lining to keep the heads from contact with the drum. If the lining is allowed to wear thin the copper rivet heads score the drum into shallow grooves, lessening the braking power. Such must be turned true on a lathe, if they are to be worth much for braking purposes.

Renew the Lining.

Equally important is the renewal of the brake lining before it is worn thin enough to expose the rivets to friction. Better have this done at the service station. It is a particular and tedious job. It is possible, however, to get the right size lining and proper rivets at almost any supply house. Remove the brake bands, punch out the old rivets, noticing how they were put in, and go to it. Remember that the rivet heads must be countersunk deep into the lining and every rivet set up tight. It requires patience, but can be done by the novice.

Many drivers do not understand the principle of alternating brakes on long hills. It is simply that long continued friction generates heat which will cause the lining to smoke, char and become brittle, wearing away easily. It does not burn, but does deteriorate. Alternating keeps down the heat. Smoke from the brake is a warning to alternate. As each car has its own peculiarities, study of brake action should be made to ascertain the best methods of handling them on your car.

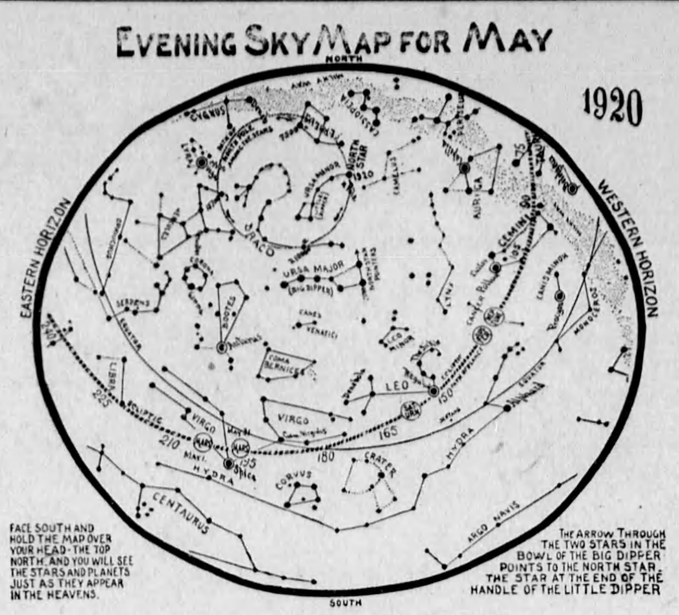
Some cars have difficulty with oil on the brake bands, working from the differential brake through the axle housing to the hub. It makes the brake slip. It comes from too much oil in the differential or using too light an oil. If it persists after these things are remedied, it may be necessary to put a felt washer in the axle housing to stop the leak. A future article probably will cover this point. An oily brake lining must be cleaned. Remove it and wash thoroughly with gasoline. The garage man probably would burn it out with a torch; you might try it if you have a torch, or by putting plenty of kerosene on the lining and letting it burn out.

The brake lining is one place where lubrication is not desirable, but every other place on the brake and linkage where there is motion should be lubricated regularly according to the manufacturer's lubrication chart, and be cleaned likewise. There is considerable wear to the clevises and pins; they may be renewed for a few cents and should not be allowed to wear to the danger point; besides worn linkage rattles.

To adjust the brakes, jack up the rear wheels and set the emergency brake at the point where it is just possible to turn one of the wheels by hand. Just in front of the brake band there is a turnbuckle or other device for adjustment; turn this on the other side of the car so that the other band holds its wheel with equal force, or, in other words, until both hold alike. If there is play in the linkage, take this up with the turnbuckle to be found just ahead of the equalizing bar. Sometimes there are no turnbuckles and the adjustment is made by removing the clevis pin and turning the clevis, which is on a thread.

Sometimes the pedal hits the floor board and does not give enough power to the brake. Take up the floor boards and adjustment will usually be found to correct this evil.

Frequent inspection and attention to lubrication requirements will insure ample brakeage for all requirements and prove the best kind of accident insurance. City driving, with frequent traffic stops, as they say of the orator, necessitates good terminal facilities. When the traffic cop says "Stop" he means it. Brakes must execute his order.



AT 9 P.M., MAY 1; 8 P.M., MAY 15; 7 P.M., MAY 31.

The Heavens in the Merry Month of May.

BY MARY A. PEASE.

There is no doubt that the grouping of the stars forming the constellations in the sky was the result of a deliberate plan on the part of those who mapped them out and pictured them on the old sky maps as animals and quaint figures, and were meant to give an imperishable record of some great event, series of events or spiritual truths for all posterity to read. So far, no Rosetta stone has been found to enable us to entirely discipher their meaning.

It is most interesting to those who study the face of the sky at all to watch the silent return to the sky of the constellations month by month and of the year. The wonderful starry procession so regular and unfaltering **announces the seasons, while below in unfailing answer we have Springtime and harvest, cold and heat, rain and** drought. If we have eyes to see, we cannot fail to be impressed by this majestic order, so smooth in working, so magnificent in scale and to feel an uplifting of spirit as we see the action of the ordinances of heaven and the evidences of the dominion thereof in the earth. It calls to mind that portion o the Lord's prayer **which reads: "Thy will be done as** in heaven so in earth."

There is something about the May season that suggests dancing. It is said that our May pole dances come to us from the circular dances of the Greeks, and that these dances were suggested by the reeling about the pole of the Bears—Ursa Major and Ursa Minor—the Big and Little Dippers. Their circumpolar dances have been poetically described as follows:

Onward the kindred bears with footsteps rude,
Dance round the pole, pursuing and pursued.

Virgo, the Virgin, the seventh constellation of the zodiac, with its beautiful first magnitude star Spica will be seen prominently displayed in our map. This lovely group softly following in the wake of the more tempestuous Leo, is suggestive of purity and spring flowers. This group of stars has been known as Virgo, among all peoples and in all parts of the world, even in China, where it is com**monly called the Frigid Maiden. As** generally drawn by the makers of constellation figures, Virgo carries a head of wheat in her left hand in which shines her brightest star Spica, which name signifies a wheat ear. The celebrated "Diamond of Virgo" is formed by Spica, Denebola in the Lion's Tail, Arcturus in Bootes and Cor Caroli in Canes Venetici. This **geometrical figure, fifty degrees in its greatest length, is most striking when** once the eye has traced it out. These four stars are all suns of enormous magnitude.

Beautiful myths are associated with Virgo, and they have all to do with production and growth. One of these is her identification with the Egyptian Isis, and it was said that she made the Milky Way by dropping wheat heads. In Judea she was known as Bethulah, and was regarded as the source of abundant harvests. Religious writers very naturally identify her with the Virgin Mary.

The celebrated "Field of the Nebulae" lies in Virgo. These number more than three hundred, and Virgo may therefore be regarded as one of the nurseries of the futur suns. This **Field of the Nebulae again gives the** association of seedtime and harvest, of growth, life and development.

Just north of Virgo lies a charming little group—Coma Berenices or Berenice's Hair. This constellation is also an ancient one, although it is not very conspicuous, and a little attention is required to separate the stars in the little glimmering group. The name is said to be that of Queen Berenice, of whom the legend is told that **her husband started on a dangerous** campaign, and that she vowed if he returned safely to give her wonderful hair to the Temple of Venus. He did return and the Queen kept her vow, so Jove translated the shining locks to the stars.

For May therefore, we have two of the virtues clearly written in the skies—Virgo for Purity and Coma Berenices for Faithfulness.

The two planets on view in May are Mars, visible in Virgo; Jupiter, in the western sky, and Saturn, near the bright star Regulus in Leo.

Two eclipses are advertised for May, that of the moon on May 2nd and that of the sun on May 18th.

REPAIRING BROKEN CHINA

When china is broken do not put it in water. Tie firmly together, and then put in a basin, containing enough skim milk to entirely cover the piece of china. Set on the back of the stove and boil one hour. Let it stand in the milk until cold. It will never come apart.

Boiled drinking water as a method of guarding against disease was practised in olden times. Herodotus tells how Cyrus had his drinking water boiled and carried in silver vessels, and Pliny the Elder relates that Nero had water boiled and afterwards cooled for drinking purposes by placing it in glass flasks surrounded by snow.

PARATHON'S FOLLY.

BY

MAX PEMBERTON.

)Author of "The Iron Pirate," "Dr. Xavier," etc.)

Billy Tupper took to flying as a duck to water. He was at the game shortly after the Wrights astonished the world at Pau, and when he fell into the Channel and did not win the big newspaper prize, he was quite sure about his destiny.

Now he is a great personage who flies the new planes from the neighborhood of Silasbury Plains—and all the flappers gaze on him with tender awe. He is the hero of a hundred conquests and of one adventure which might very well have cost him his liberty. So let us now talk about famous men.

It was just about a month ago. Billy was out for a long flight upon a machine I must not name; and in the course of that flight he found himself over an island which is also part of England, and incidentally above a famous convict prison, where the prisoners are supposed to be so exclusive in their tastes that nobody under the rank of Viscount has any chance of popularity among them. Billy knew nothing of this, for he was a thousand feet up in the air, and the unhappy convicts below were but so many flies upon a great green carpet. Moreover, his petrol pipe was troublesome, he was really beginning to wonder whether he would take lunch in this world or the next.

They are amazing creatures these aviators, and the rest of us must continue to regard them with an admiration we cannot express in words. Some of us are frightened out of our wits if we are asked to stand upon a ladder fifty feet high, and look down upon the giddy throng below. Your flyer, on the other hand, clings to a flimsy kite at an altitude of five thousand feet and never turns a hair when the old girl begins to wobble. "Prodigious," as the great Dominie used to say.

Billy Tupper was one of these. He used very bad language upon occasion, but he never stopped to think what would happen to him if the "old girl" gave it up, and he went hurtling like a stone to the ground some thousands of feet below. Upon this particular day he had a scare beyond ordinary, for it really did seem as though the engine had had enough of it—and convinced that he really might lunch in Paradise, he made a mighty quick descent, and landed, as he put it, absolutely on the clock.

Now the scene of this descent was a wide field upon the edge of the downland. In this field were working some half-dozen highly distinguished gentlemen whom the King (God bless him) had stamped with a very broad arrow to show how fond he was of them. A very lusty fellow with a watchful eye and a rubicund joul superintended the labors of these aristocrats, who appeared to be engaged in the childlike occupation of making hay while the sun shone. Naturally, the advent of Billy and his machine was a tremendous event in a society not given to excitements; and no sooner was the lad down than the convicts swarmed about him, and began to ply him with a hundred questions. He answered them all with his accustomed cheerfulness, and was about to distribute a packet of "gaspers" among them when a shrill whistle from the warder recalled them to their duties, and they slunk off sadly as lads who have heard a school bell ringing.

Billy was very sorry for these good fellows, and he did not offer his cigarettes to the warder. That fellow seemed chiefly interested in beer, his first remark concerned a jorum which Flight-Lieutenant Tupper had stowed away in the observer's seat of his monoplane.

"Thirsty work yours," said the man. Billy agreed that it was. In truth he was not thinking about the beer at all, but of the eyes of the unhappy prisoners, fixed upon him so wistfully that he would never forget their gaze however long he might live. They were the eyes of a handsome man in the prime of life, but they spoke with rare eloquence. Such an one, said Billy, was trying to look out to the world he had left. He saw figures there, but chiefly the face of a woman he loved. Billy was quite sure of it. The man lived through a mad moment, and the eyes said "save me" as plain as anything ever was said in all this world.

"Thirsty work," the warder repeated. Billy agreed that it was. A new and wonderful idea had come into his madcap noddle and it excited him strangely.

"Like a drop of beer?" he asked. Now, what could the fellow say?

(Te be Continued.)

SHOULD COW WEAR AUTO TAIL LIGHT?

Yes, Says Motorist Who Hit Animal at Night.

Justice of the Peace Egbert L'Ecluse of Great Neck, L.I., is face to face with this problem:

"Can a cow moving along the highway at night be considered such a moving vehicle under the motor law as to be compelled to carry a red light in the rear?"

"The facts in this case are unusual," said Judge L'Ecluse. "One of our most influential residents was driving home the other evening in an automobile. Ahead of him was a man in a wagon who had a cow attached to the rear of the wagon.

"The wagon, as required by law, had a red lantern at the rear. The cow had surreptitiously pulled loose and proceeded to select her own route over the highway. The motorist saw the red light at the rear of the wagon and shaped his course to avoid it. In doing so he ran into the cow, which had no red lights exposed. Quite a mix-up followed.

"The driver of the automobile has requested a warrant for the arrest of the owner of the cow on the grounds that the cow was moving on the highway without the proper rear lights."

The Quiet Observer

A Great Irish Soldier.

Field Marshal Sir Henry Wilson was recently given the freedom of the city of Belfast. The Dowager Marchioness of Dufferin, who was in Canada during her husband's term of office as Governor-General in the 'seventies, and the Marquis of Londonderry were similarly honoured at the same time. Sir Henry recalled having come over nineteen years ago to Belfast "as aide-de-camp to one of the greatest soldiers, one of the greatest gentlemen, and one of the greatest Irishmen that ever lived—Lord Roberts. He remembered, when crossing between Strausaer and Ireland, Lord Roberts throwing his cup of tea at a cat. It was the only thing in the world that the great Field Marshal was afraid of." Sir Henry is Honorary Colonel of the Royal Irish Rifles, a distinction of which he says he is prouder than any other he has gained. The regiment raised twenty-one battalions during the war, and lost 22,000 men. Sir Henry prepared all the plans and superintended the landing of the first expeditionary force in Belgium, and Premier Lloyd George, at a Parliamentary dinner given in Sir Henry's honor, declared that his forecast of the field operations of 1918 made in January of that year, was one of the most remarkable military predictions on record. This was at the time when he became chief of the Imperial staff.

No Politics in Public Service.

One of the results of the vote in Parliament endorsing the transfer of the Grand Trunk to the National Railways appears to be a properly independent stand on the part of President Hanna in the face of partisan charges against his management of the National lines. His stated intention to bring action for libel where charges of favoritism have been made will clear the air. The one thing on which the success of public ownership depends is the absence of any kind of deviation from the strictest fairness and impartiality of administration. It is a remarkable tribute to the high quality of public service that there has been almost no exception to the rule of the sincerest probity and the most unvarying devotion to the public interest wherever public service has been established. The one essential, says Sir Adam Beck, who has had fifteen years' experience of public ownership, is to keep it out of politics. If the National Railways are kept out or politics and run in the public interest there need be no fear of their success. The fullest possible publicity in regard to their affairs will assist in bringing about this result.

Rearranging the Levant.

It will comfort many students of history to know that the mandates for Mesopotamia and Palestine have fallen to Great Britain. France is to have the mandate for Syria and Armenia is to be an independent state. It is the general view that a grave mistake is being made in leaving Turkey with any influence in Europe. Out "bag and baggage" with the despots of Constantinople is the only one that commends itself to most. It may turn out that the case is not so bad as it seems. The Dardanelles and access to the Black Sea generally will be internationalized, and if the Turk is unable to behave himself decently under his new conditions, something more drastic will assuredly follow under the League of Nations. A mistake has evidently been made in the disposition of Albania. Italy is jealous of the increased importance in the Mediterranean attained by Greece, and all the Slav States, Jugo and northern, new and old, are an unknown quantity. Teutonism is being thrown into alliance with Slavdom, and future war is freely discussed in many official circles as the only solution for problems that are bound to arise. The failure of the United States to rise to a great occasion is largely responsible for this, but it is hoped by many excellent authorities that the League of Nations will be able to function even though Uncle Sam stand aloof, and that through this agency general war may be avoided.

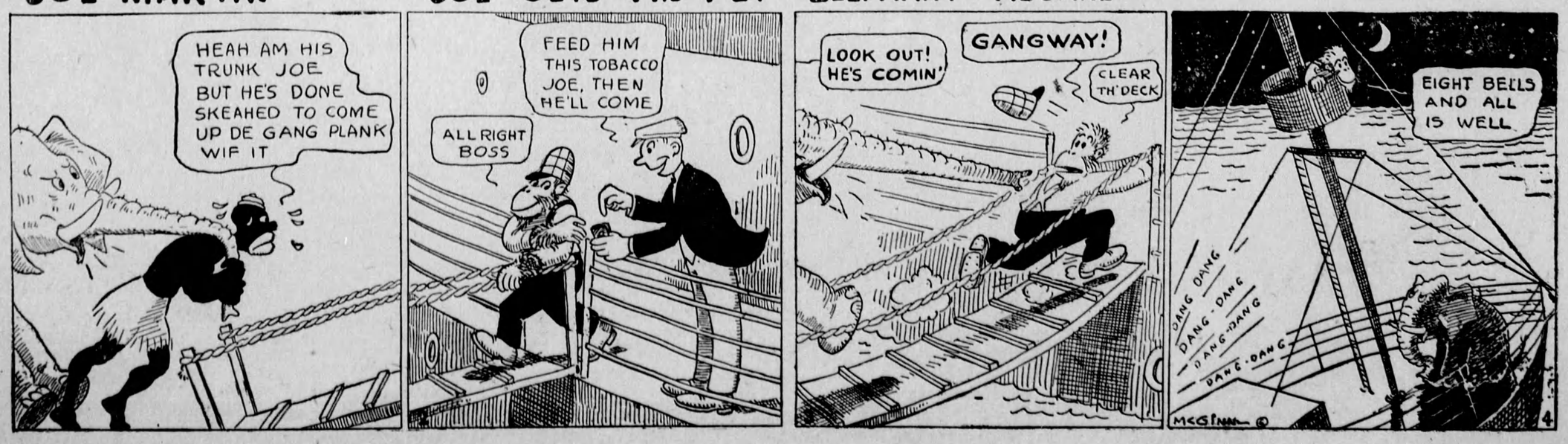
To Consult the People.

While somewhat belated, the decision of the provincial Conservatives to call a convention of the party for next October is an excellent move for Ontario. There was nothing to be gained for the party or the people by the autocratic policy followed prior to the recent election, which had been pursued since Sir James Whitney's death. Whatever merit may attach to the party system the advantages of competition must be reckoned among them. In the last election, however, the Conservatives practically declined to compete, leaving the Liberals, the Farmers and the Labor party in the field, all with carefully constructed and not dissimilar platforms. The Conservatives merely asked the people to trust Sir William Hearst. It takes a very big man indeed to secure the confidence of the people to such an extent that they will give him carte blanche, and Sir William, whatever his merits, was certainly not as big a man as Sir James Whitney, who was elected on a new platform, and retained the confidence of the people by seeing it was carried out.

Postal War Tax Remains.

There will be much complaint over the decision to continue the war tax on letters mailed in Canada, but as Great Britain has decided to double her postal war tax, making a four-cent rate for letters, Canadians paying three cents have not much to complain about. At the same time the taxes on "Knowledge" are becoming serious. In France the rise in the cost of paper and printers' wages threaten to extinguish the publication business in certain directions. In England the Athenaeum has published an article on he decline of book reviewing and the consequent lowering of the public taste and standards. Space cannot be afforded for reviewers. The amount of work available in consequence, and the low rates paid for reviewing make it impossible for skilled writers to devote themselves to this kind of work. The effect of a lowering of literary standards would probably not be felt immediately, but it would be none the less certain in the long run. Taxes on knowledge, however imposed, are not good for civilization.

Saving Daylight.

Daylight saving is not apparently in favor on the continent of America this year. In Europe, including the British Isles, they appreciate the immense advantage and economy of the measure. There is little use in trying to establish it in isolated cities or localities, however. It is only when the whole business of the nation moves together that it becomes practicable. When the railways in the United States failed to provide for it this year it became impossible for the Canadian railways to adopt it. Without the railways,, the mails, the courts, the government offices, it is difficult to see how the rest of a community can get satisfaction from it. It is said that the farmer objects to it, but this can only be in some localities. The farmer, according to his longitude, is always more or less out of touch with the sun, and in any case he is master of his own conditions. He very rarely loses any daylight.

JOE MARTIN — JOE GETS HIS PET ELEPHANT ABOARD