Mr. President, Members of the Congress:

Doubtless no paper read before this most eminent Railway Congress will have to deal with a question of greater vital interest, both to the great travelling public and to the now vast army of railway employes, than this of safety appliances as connected with handling cars and running trains. Great and absolutely beyond the grasp of the mind to properly conceive of the value to us as a nation as are the advantages accruing to us from railway transportation of what we term freight, still all this weighs as of little worth when life is in the other scale of the balance. This trite saying expresses it: "What is all the world to a man when his wife is a widow?" What matters it if I can take my cars of stock to a great central market from my farm 500 miles away in 24 hours, if after disposing of that stock at good prices on my homeward journey with the proceeds in my pocket I lose my life in a wreck caused by lack of proper safety appliances?

While we want quick transportation for our stuff, we want safe as well as rapid transit for ourselves more. But where in the history of the marvelous development of railroad facilities shall we begin the discussion of safety appliances?

A careful study of the exhibits in yonder Transportation Building will not only surprise but serve to correct us in the matter of dates as to the original idea and use of rails for roadways for heavy traffic. We are so accustomed to look back to 1830 when the Manchester & Liverpool railway was opened, as the birth of railroads. While it may be true about that date commenced the application of steam for propelling carriages upon "tram" or railways, we must go back yet 200 years further at least to find the first railway used in England. It may help our memories some to associate the first recorded use of rails laid from the collieries at New Castle to the shipping docks with the landing of the Pilgrim Fathers upon the shores of this new world. These rails were made of plank, six feet long and four inches thick. These wooden rails were in course of time worn and rendered unsafe, and to remedy this plates of iron were spiked upon them, and the men who did this work soon became known as "plate layers," a name to-day used in some parts of England to denote the men who lay the safer 30 feet steel rail, 35 to 90 pounds to the yard. Striking contrast truly between the kind of rails. These iron-plated rails of course caused rapid wear to the old
wooden wheels of the carts, and for safety cast iron wheels were introduced in 1765-70. The iron-plated rails gave place to cast rails three feet long four inches wide, *with a flange on the inner side* to guide the wheels.

In 1789 Engineer Mr. William Jessop in building a railroad from Loughborough to Leicestershire made a wonderful forward step in the safety line by abandoning the *flanged* rail and bringing in the *flanged wheel*. Here let us note was the advent of one of the great safety appliances upon which depends the safety of all railroad travel and traffic of the present hour, viz.: "the flanged wheel." Who of us ever think when rounding a sharp curve in a palace car at 40 to 50 miles an hour that William Jessop, an almost forgotten engineer and mechanic of England 100 years ago, invented and brought out the very idea that to-day is the greatest practical safety appliance that holds our flying trains in safety to the rail?

It might be interesting and instructive to follow up step by step the changes and progress made both in wheel and rail as well as in the substructure; but over there in the White City this can all be taken in by object lessons. How natural, too, it was to think that the firmer and more solid the foundation upon which the rails were laid the safer it would be, and at what immense cost were stone pillars and sleepers put down on which to lay the rails. How many thousands of dollars it has cost to learn that "elasticity" in the substructure is an essential safety appliance. Not only in Old England but in our New England early pioneers in railroad building had to pay dear to learn this important lesson.

But leaving these days of small beginnings, which, however, are not to be despised, we come down, or rather up, to our wondrous and grand magnificent achievements. It is utterly useless to attempt to find qualifying words to suitably express the status of railroad transportation as it confronts us in this year of our Lord 1893, and as we see it in epitome in yonder building. To say that to-day the safest possible way of locomotion is by the steam railroad car is but simply stating an absolute fact.

Here is seen the crowning triumph of inventive talent, mechanical ability and skill such as the world has never before witnessed. A passenger train of cars hurled through space at the enormous velocity of 65 to 70 miles an hour with as much and more safety to each of its 200 to 500 passengers as if riding behind his own old family horse drawing the stout family wagon, is the marvel of this present hour. Somebody somewhere has done a great deal of hard thinking, and somebody has done a great deal of honest and faithful experimenting and reduced to practical application the results of this hard thinking.

All of us who take part here can well remember the nervous fear we had of telescoping when riding on trains prior to the advent
of the Miller hook and platform. Some of us may carry to our graves the scars received from the jerks and shocks common to all passenger trains coupled with the old style link and pin and controlled, or attempted control, by hand brakes.

In the blaze and glory of the achievements of the present in railway travel it is difficult for us to realize that it was so few years back the public was so well pleased with the, to us now, unsafe and rude appliances on trains.

The advancement in safety appliances on passenger trains is something wonderful for the rapid succession of improvements. To the memory of those who have participated in and have been in a sense a part of it, it is nearly like that which presents itself to the eye in the Transportation Building on the grounds in the park. We are looking for the moment on the crude, the rough, the now would-be uncomfortable, the slow and tedious, and in many respects unsafe methods of travel of the past. We turn and in the next minute we are revelling in all the luxurious belongings, time, distance, and danger annihilating vestibule palace train of the now, and standing at its head this marvel of our century, the present improved locomotive "999" and its equal fellows. But what one thing of all that so greatly interests every spectator in these magnificent outfits for rapid and safe transit above all others gives such unparalleled safety to that ponderous engine and its modern parlors and sleeping apartments on wheels?

Next in importance for safety to the flange on the wheel which holds that wheel to the track is the necessity of some mighty power to grasp that wheel in a vice-like grip to stop its roll when its continued motion would carry the train to danger.

The common hand-brake was found to be on this greatly increased weight of improved engines and cars utterly incompetent and unsafe. Various forms of power brakes were brought out by inventors, chain, buffer, straight air, vacuum and other forms of brakes were tried, and while some of them were a great advance over the hand-brakes, yet the great want was not met until the advent of the Westinghouse automatic air-brake. The myriads of humanity that now travel owe a debt to George Westinghouse, Jr., they can never pay. It matters not how many good and great inventors may travel in roads now made plain, to George Westinghouse is due the power of going ahead and blazing the trees that enables lesser daring ones to follow.

It is not the design of this paper to advertise or unduly extol any one method or man; simple facts and strict justice are the ends sought. The speaker, perhaps, more than any other man outside of railroad circles and the inventors and makers of power brakes can speak with more confident intelligence upon this point. He hopes to be able to do this without offensive egotism.
It was his privilege as a State Railroad Commissioner of Iowa to be honored with an invitation from the committee of experts from the Master Car Builders' Association to participate in the noted brake tests at Burlington on the C., B. & Q. road in charge of this committee in 1886 and 1887. While the object sought in these tests was to find some practical power brake suitable for freight train service, the want of which was beginning to be felt as imperative and which will be discussed further on, yet as a result of those remarkable tests under the faithful and most conscientious work of that committee of experts, of which Mr. G. W. Rhodes, Master of Motive Power of the Burlington Railroad, was chairman, we have now the quick-acting brake brought out in the fall of 1887 by Mr. Westinghouse which gives so much greater safety to every passenger by rail. As already intimated, it matters not how many firms may now be making a quick-acting brake, the name of George Westinghouse should and will be handed down by historians of railroad safety appliances as the one man whose wonderful inventive ability has done more to make travel by steam railroad so almost absolutely safe than any other man in the world.

Right here it may be in place to analyze briefly the "why" these amazingly rapid strides in all that not only pertains to safety but comfort of travel on our railroad trains and also to ask the question, Is there need of any compulsory legislation to enhance still more the safety of travel on passenger trains? I am very frank to say that I have always felt that this whole matter would take care of itself. There never has been and in my judgment there never will be any urgent need of legislation upon this particular subject, viz: Safety to passengers. Why? Simply because the great law of competition will take care of this better than any legislation, state or national.

Let one road abolish the stove as a means of heating its cars and publish that fact, its competitor and parallel neighbor must do so too or see its customers going to the safer heated cars. The same is also true of lighting methods. Let one road advertise that "its cars are lighted with Pintsch gas and absolutely safe," while its competitors use other and less safe means, and the fear of being in a burning wreck set on fire by unsafe lamps will drive passengers to the cars with the safer light. There never has been, and I repeat, there never will be, in my judgment, any great necessity for laws requiring safety appliances on passenger cars and trains. So great is the strife to secure passenger traffic, as a mere advertising method it is cheaper by all odds to use at all times the best known practical safety appliances. And with what a miracle of superb excellences and luxurious comfort and with all known appliances that will add one iota of greater safety are our passenger cars now perfected. The enterprise of all our roads of any considerable importance shown in this direction is worthy of all praise. No general manager or president has
to beg long for necessary funds from the board of directors for this purpose.

To-day America stands far ahead of all the rest of the world in her appointments for comfortable, luxurious, rapid, cheap and safe passenger traffic; and competition will take good care that neither of these conditions will ever be lowered. If ever the aid of the law-making power should be invoked to regulate anything in regard to passenger traffic we need not be surprised to see it used to restrict speed and competition. We may yet find it necessary to control competition by law as a matter of safety appliance both to distant and innocent stockholders of railroad property and also as a means of safety to the travelling public. There is a growing mania for fast trains as an advertising scheme, yet who of the wisest in railroad lore is yet ready to say where the limits of speed and the greatest reasonable safety meet? All along the history of railroading the impossible of to-day has been the practical of to-morrow.

But I am aware that I was honored with a request to prepare a paper upon safety appliances to be read here because of my supposed interest in this matter as connected with employes in the freight train service. A wide field opens out before us as we enter upon the discussion of this part of the subject. We are to meet with facts here that should be dealt with frankly, candidly and yet in plain, unvarnished truth and justice. It is reported that there are now something like 800,000 to 1,000,000 men and women employed by the railways of this nation; of these say 250,000 men are employed in train and yard service. The reports of the state railroad commissioners, in states where the law creates such officers, and the reports of the inter-state commerce commission show that out of this 250,000 not less than 25,000 meet with casualties yearly, many fatal, more making them life cripples and still more painful injuries, but which allow of partial recovery so that the victim returns again to work. Neither of these sources give us all the exact facts. Some states do not have any state railroad commission board and purely state roads are under no law by which they are required to report to the inter-state commerce commission. Hence we can readily see that we do not get from these sources reports of all casualties to employes. The National Association of Railway Surgeons at their annual convention last year at Old Point Comfort in Virginia made the astounding report that the preceding year furnished over 31,000 subjects for their investigation and skillful aid. This is simply horrible and challenges credence. Over one in every eight employed in handling cars and trains in this country must be either killed or more or less maimed every twelve months.

As a rule the railway surgeon catches all who are badly hurt, thousands of others get slight injuries who never come to the surgeon. There is at present no way by which we can get reports that
will give all, but in the name of humanity is not 31,000 enough for one short year? Who can realize all that that means? Something like 3,000 are killed outright. These, too, are all strong, able-bodied men, right in the flush of manhood. From my own investigations, which need not here be detailed, I can, with great confidence, say that at the very least fully 50 per cent of this large number are killed or injured from two causes alone, viz., the continued use of old style hand couplers and the hand brake.

Before this audience I need not dwell on the terrible facts here brought out; I will merely ask you to estimate for yourselves this: If last year the old link and pin draw-bar and the hand brake called for the lives, limbs or untold sufferings of 15,000 of these hardy and faithful railroad employes, how many lives, how many limbs and how much pain and anguish have been offered up on this altar of—what shall I name it?—since the first freight train rolled over rails in America? None of us can answer this. Can any one of us answer why this has been suffered to go on year after year and this horrible sacrifice of life kept up? Why has the crowning achievement of this century, “this unparalleled perfection of railroad transportation” been bought at so dear a price? Why has it been allowed that every mile of rail laid in America has been bathed in the blood of the faithful employe?

Now, dare I trust myself to go on and in this presence say just how this matter stands in my mind, and I, being an average of the common layman, show how it appears to us, the common people? Will my motive be understood and appreciated? My only desire in presenting this paper is to do some good, to help on and accelerate the grand work now being done by all the more progressive roads in fitting their cars with automatic couplers and power brakes. Please accept what I say in the spirit in which I give it. This Congress is an epoch in the railroad history of America; papers read here are not merely for to-day.

The terrible record confronts us. Somewhere responsibility rests. Are these employes to be blamed for being killed, crippled and injured? If not, who is? Is any one? None of us are willing to say no to this. Corporate bodies scatter and so thin out responsibility that individual responsibility becomes nearly lost; still there must be somewhere a fault and responsibility. Will it do to lay it to a lack of inventive and mechanical skill? I think not. These have been active and effective to make passenger travel almost marvelously safe. Why? Is it not because in addition to competition the courts have held the roads responsible for the safety of the passengers? You all see at once I mean a great deal by this. Has the making of one ruling for the passenger and another for the employe been a safety appliance for the latter?

I am not here to give a tirade against the courts. I honor
learning, wisdom and ability, but will it be out of place for me to modestly suggest that to-day, under the greatly changed condition of affairs, brought in with the advent of the locomotive, that the rulings of the court, founded on the relations of master to servant, of servant to fellow servant and co-laborer, 200 years ago are scarcely sufficient to meet the changed conditions of to-day.

Pardon me a moment while I attempt to analyze for illustration. Here is an intended passenger. It is not absolutely necessary that he should take the train. He knows that accidents do happen to trains. He knows that the dispatcher in yonder office *may* make a mistake and send his train crashing into another. He knows all this, but still he takes the train; but does the court hold him as contributing to the results of the collision that costs him his life? Does it hold that he assumed the risk and therefore cannot recover? On the other hand here is a green, simple boy, infatuated with a desire to be a trainman. You and I and all the great public and the court judges even want him, green as he is, to become a railroad employe because somebody must run the train. We want to ride, we want to send and receive our goods. It is absolutely necessary that this boy, unsophisticated and rustic as he is, having hardly the slightest idea of what railroading is, knowing nothing really of its perils, but desiring to follow this as his life work, and in so doing will be a great benefit to us all, to stockholders and to all, he goes, and in attempting to couple the first car perhaps is killed. Parents seek to recover something, but the judge whose library was in the car that killed the boy decides that as the boy was supposed to know all the dangers of railroading he assumed the risks and by trying to do what we all wanted him to do; what the judge wanted him to do so he could get his package of law books; doing what the poor boy was in a sense compelled to do to earn his bread; doing his part in carrying on that which is now become a necessity of our civilization, because he did this he contributed by his own negligence to his death, and therefore the parents of the boy cannot recover.

What, we common people ask, are our laws and our courts for? Are they for the strong or for the weak? But let me be fully understood here. I grant I am in earnest and using plain English. Is it that I would mulct the roads in large sums to enrich the employe or his family? No! no! not at all! That is not it at all. I am a friend to the railroads. I have nothing in common with this senseless howl of the demagogues against corporations and roads. While a life-long farmer I realize that the prosperity of the roads is the result of my prosperity. The best interest of the roads and the highest prosperity of the communities they serve are one and the same. There is a community of interests so patent that the "blind" could see it. It is because I am a friend to the roads that I deal in plain words. Let the courts hold the roads to as rigid responsibility for
the life of the employe as for the passenger and it would be the most effectual safety appliance possible. It would then be only a question of short time when every car would be equipped with automatic couplers and every train with power brakes. Then this dark, foul blot on this otherwise grandest achievement of this nineteenth century would be washed away.

Take another case. The company, for some reason good to itself, employs a dispatcher. He proves incompetent, he gets drunk, in his maudlin stupidity he sends two trains together and lives of trainmen are sacrificed and others are crippled for life. "Can not recover because it was caused by negligence of a co-employe." Did the dead men have any voice in employing the incompetent dispatcher?

In the same collision passengers are injured. The courts allow them heavy damages, but the faithful engineer who, when he saw the crash inevitable, still stood by his throttle and lever in faithful and heroic but vain attempts because of lack of power brakes to save his train and dying in the effort, leaves a beggared wife who cannot recover, so says the court, but the wife of the passenger killed gets ten thousand dollars at the hand of the same judge. Such rulings as these of our courts are not safety appliances and they do not hasten to put proper safety appliances on our freight trains, but turn our passenger trains into museums of safety appliances. But neither the corporations nor the courts must shoulder all the responsibility, and this paper would fail of its purpose if it stopped here.

The great general public who are reaping the inestimable advantage of rail transportation have not only stood silently by "holding the clothes" of those most active in the immediate responsibility, but have virtually urged on this inhuman work. How? By this extreme and unreasoning prejudice against railroads, resulting in laws that cripple them as to resources so that it becomes extremely difficult to devise ways and means by which safety appliances can be secured to equip the freight cars of this nation with automatic couplers and power brakes which will cost not less than $75,000,000.

The public should cease its clamor for cheap rates until the roads had first made railway work the safest possible for their men. Allow the roads to charge reasonable rates and then hold them to a strict responsibility for the lives and persons of their employes. It may be asked by some why this kind of talk now that a national law is in power requiring safety appliances on freight cars. Because it is one thing to have a law and another thing to have a public sentiment to back up and execute that law. But this paper would be far from accomplishing its purpose if it did not, to the best of its ability, attempt to give praise to whom vast amount of praise is due. The world will never know how much we are indebted for the wonderful immunity we have from accidents in railway travel and traffic to the
untiring and most intelligent and faithful work of the technical departments of our railroad companies.

It has been the speaker's high privilege for the last five or six years to be allowed to meet many of these officials in their National Convention, more especially with what are known as the National Master Car Builders' and Master Mechanics' Association. These Associations represent from 90 to 95 per cent. of all cars of the continent. The members of these Associations are men of thoroughly trained minds and of great practical knowledge. At the annual conventions of these Associations members come from nearly every road in the states and Canada. At these conventions everything that goes to the make up of the best possible locomotive, passenger and freight car is discussed from a practical standpoint.

It is with these men where the ground work foundation of the wonderful safety for railroad travel is laid. Aside from the annual meetings each considerable locality has its local club of these men where they meet either once a month or once in two weeks when able papers are read and discussed relative to all these matters of car building and the greatest possible safety combined with consistent economy. These men blow no trumpets, they do no posing before the public, but quietly in the great railroad shops and in the laboratories of the great railroad systems they are working out the problems of economical and safe railroad transportation.

These men have evolved uniform standards for almost every thing that enters into the make up of cars. Probably no one thing in all these investigations, tests, and experiments has received such close, faithful and impartial study and long earnest interchange of views as this of a uniform safe coupler and a power brake for freight cars.

After years of patient work the committee on automatic couplers made their final report to the National Convention held in Minneapolis in June, 1887. The committee reported in favor of the Janney vertical plane hook type as a standard form of coupler, and the convention, by a two-thirds vote, adopted this report which was afterwards confirmed by a letter ballot of over a two-thirds vote of all the roads represented in that association, which was not less than 90 per cent. of all the roads in the nation. This form of a car coupler or draw-bar has grown more and more in favor with the roads until now the Great American Railway Association, including in its membership about 75 per cent. of all miles of railroad of the nation, are practically a unite in favor of this form of draw-bar as the standard automatic coupler for all the freight cars of America.

One of the defects of the recent Congressional legislation upon this subject of safety appliances is, that it does not recognize and legalize this meritorious work of these eminently practical mechanics, the Master Car Builders, in so many words. But so many of the
leading roads having adopted this form of coupler as "standard,"
the strong, though unwritten law of interchange among railways,
will have the same result as though legalized by Congress.

It is intensely gratifying to note the grand work now being done
by the leading roads in equipping their cars with the M. C. B. type
of safety couplers. It is unfortunate that there are so many varieties
of this type being put on to cars. If our coupler makers could only
pool their issues and have but absolutely one make of this type, as
was nearly the case for years with the Miller hook and platform on
passenger cars, so that every car would be fitted up with this one
make and the unlocking device the same on every car, it would then
seem that car coupling work would be rendered as safe as we could
reasonably ask for it to be. Would it not be wise to seek to amend
the present law to this effect?

Indeed, it might well be remarked here that, had all the roads
evinced such enterprise in this matter of safety couplers and brakes
as certain progressive roads that could be mentioned, there would
have been no need of the law. The law was and is a necessity to
spur on the laggard roads.

Fearful and dangerous as the work of car coupling is, and
almost incredible the long lists of fatalities and injuries arising there¬
from, still the actual *fatalities* are greater in number from the con¬
tinued use of the old hand brake on freight cars than from any other
one cause.

When one comes to really get right down to a contemplation of
the actual facts of the exposure and risk incurred by a freight brake¬
man, no man who has left in him one spark of real humane manhood
can for a moment be reconciled to the conditions that confronts him.
The future historian of railroading in America will find it hard to
make posterity believe that human beings were required to ride decks
of our freight cars facing the bitter blasts of winter, with mercury
down to 20 to 30 below zero, compelled to run from top of one car
to another; the black smoke and steam from the engine blinding him
as it rolls back over the train in dense volumes so that he cannot see
the deadly chasm between the ends of the rolling, swinging, jerking
cars, covered with sleet and snow, and rushing against a winter gale
of 30 miles an hour at the rate of 25 miles; made, I say, to ride
those cars under such conditions, which are every day occurrences in
our winter months, and what for? Why to interpose his puny
strength between that ponderous train and its momentum and a
danger ahead sure to be met unless he can by the old brake stop the
train, which on such a night and down that grade is about like the
fabulous fly upon the bull's horn.

Now, is there a man of us here to-day who would do the work
of a freight brakeman one winter's night for all the railroads on the
continent? No, not one. Still tens of thousands of our fellow men,
bone of our bone, flesh of our flesh, are doing just this kind of work, year in and year out, right here in Christian America. And when in one of these black, cold, stormy nights, with the wind howling a hurricane, decks covered with ice, his glimmer of a lantern blown out, yet true to his trust pushing on to reach the brakes, he slips and drops between the cars and is ground into an unrecognizable mass under cold, cruel iron, and his mother, when seeking some recompense for the idol of her heart and her only support, is told by him who is appointed to hold the scales of exact justice, "You can't recover. Your son assumed all the hazards of the work."

It does seem to a common man that such ruling is not a safety appliance, when at the same time it is a matter of common intelligence that down that same grade on just such a night a train of 50 cars can be hurled at the rate of 40 miles an hour and in case of necessity can be brought to a standstill by the modern, quick-acting power brake inside of 500 feet and not a train-man need to leave the caboose, all being done by a simple turn of the wrist of the engineer in his cab. Under just such conditions as described, thousands of our strong young men have met their most tragic death and still the work goes on, but now, thank God, in a decreasing rate.

It may very pertinently be asked why, if power brakes are practical for freight cars, do not managers put them on? Managers do not always have the say about such things. Brakes and couplers cost money. Money of a railroad company cannot be used in large quantities for such purposes only as appropriated by vote of directors any more than public funds can be used to build post offices only as appropriated by Congress. These Boards of Directors have stockholders behind them; of these many of them are absentees and they, not fully understanding the necessity, will not readily listen to calls for money for improvements.

While the operating departments now recognize the fact that power brakes and automatic couplers are not only good and necessary for safety to trainmen, but are actually economic appliances; while they know that when 12 to 20 per cent. of the cars of a train, fitted up with train brakes and so located as to be used, enables the engineer to make much better time and gives him a more complete control of his train than the assistance of any three brakemen could possibly give; yet these men are powerless unless the money is regularly appropriated for this purpose. The object of the present national law is to re-inforce managers and other officials when they ask for means to put on these safety appliances. Now they say, "Thus saith the law," and the money must come.

In the face of facts now so patent it does seem that the rulings of the courts should be more or less moulded to meet the present conditions.

Automatic standard couplers have been adopted by the railroads
themselves on their own motion by practically a unanimous letter ballot vote after 90 days' consideration upon the action of their own officials, viz., The Master Car Builders. The standard height of draw-bars has also been in the same way established. It is also now established as a conceded fact that the air-brake is practically applicable to freight train services, whereby the engineer has far better control of his train than can be given him by half a dozen brakemen, hence relieving the latter of the great risk and exposure formerly met.

Aside from these safety appliances there are others that could be profitably mentioned, but I have already exceeded my time and exhausted your patience.

The cultivating of good will between officials and men. This attempt at profit sharing, so commendably undertaken by the Illinois Central company, and above all, this wonderful movement among the men themselves in the interest of total abstinence from all that intoxicates, whether when on duty or off, as witnessed by the remarkable fact that in one short year from its inception nearly 100,000 practical railway men have put on the white R. R. T. A. button of total abstinence from all that befuddles the brain, is one of the greatest movements on the road of safety appliances ever undertaken by railroad men, and when we can see all the officials also wearing this white button in good faith for the encouragement and help of the men, we may then say the day is dawning when the record of railroad accidents shall be few and far between.

One word more and I am done. Overtime, not allowed proper time for rest, is certainly not a safety appliance. Crank as I may be called because of my views and words on safety appliances, yet I will venture the assertion that when men have regular hours of rest, have their one day rest in seven, we shall find that they rise up from mere machine-like things with a "don't-care-a-damn" way of doing things to that of thinking, reasonable men with an interest in their work and regard for the rights of property. Sunday rest as far as possibly practical in the exigencies of the movement of the commerce of a great nation, will, in my judgment, be a very important factor in safety appliances.

L. S. COFFIN,
Fort Dodge, Iowa.

Ex-Railroad Commissioner.