

**HEARINGS BEFORE THE COMMITTEE ON  
INTERSTATE AND FOREIGN COMMERCE  
OF THE HOUSE OF REPRESENTATIVES  
ON H. R. 7557 TO PROMOTE SAFE  
TRANSPORTATION OF EXPLOSIVES**

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Hearings Before the Committee on Interstate and Foreign Commerce of the House of  
Representatives on H. R. 7557 to Promote Safe Transportation of Explosives by Various

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## COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

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U.S. HOUSE OF REPRESENTATIVES

ON

### H. R. 7557

TO PROMOTE THE SAFE TRANSPORTA-  
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COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
HOUSE OF REPRESENTATIVES,  
*Washington, D. C., Friday, February 7, 1908.*

The committee met this day at 10.30 o'clock a. m., Hon. William P. Hepburn (chairman) presiding.

Mr. SHERMAN. Mr. Chairman, General Humphrey and several other gentlemen are here present in reference to the bill to regulate the transportation of explosives, which is made a special order for to-day.

Mr. MANN. That is bill H. R. 7557.

Mr. SHERMAN. Mr. Chairman, Doctor Dudley is also here, to explain the provisions and purposes of the bill, H. R. 7557, as to the transportation of explosives.

The CHAIRMAN. Very well. Doctor, give to the stenographer your full name and address.

**STATEMENT OF DR. CHARLES B. DUDLEY, OF ALTOONA, PA.,  
CHIEF CHEMIST, PENNSYLVANIA RAILROAD COMPANY.**

Doctor DUDLEY. My name is Charles B. Dudley. I am the chemist of the Pennsylvania Railroad and president of the bureau for the safe transportation of explosives. I think that covers the ground. My residence is Altoona, Pa.

Mr. ESCH. Did you appear before the committee at a former hearing on this subject, two or three years ago, with Mr. McCrea?

Doctor DUDLEY. Yes. Will you prefer, Mr. Chairman, to ask questions, or—

The CHAIRMAN. If you will go on in the first place and state what you have in mind it will be agreeable to us, and then we may ask questions afterwards.

Doctor DUDLEY. I would like to say that the necessity for this bill seems to be, very briefly, as follows: First, there is quite a body of legislation in the statutes of the United States that is antiquated, that is not applicable to the present conditions of the manufacture and transportation of explosives; legislation that carries a serious penalty with it for the violation of the law; and one of the purposes of this bill is to ask you to substitute this legislation, which is believed to be up to date, for all previous antiquated legislation. That is one of the purposes of the bill.

Second, uniformity in the regulations applying to the different railroads has been found to be of the utmost importance in securing the enforcement of such precautions as are necessary to produce safety in transportation. If one railroad has one set of regulations and another railroad has another set, or if one has none and another has good regulations that are essential for its safety, the one having

no regulations would get the bulk of the business, and consequently there will be no control. That has been one of the difficulties in getting uniformity in the way of safety in transportation.

Perhaps I should go back a moment and say that instead of asking Congress to take complete supervision of this whole matter of the manufacture, storage, and transportation of explosives, it has been decided after a good deal of discussion—and the bill was brought before you four years ago with the idea in mind of asking Congress to do that very thing—I say it has been decided to be advisable to allow the manufacturers of explosives and the transportation companies to handle the matter themselves, independent of Congressional action, if possible. That attempt is being made now, and here is a galley proof of regulations that have been agreed upon, or are in process of being agreed upon, as a revision of the regulations now in force by some 93 of the largest railroads, representing 140,000 miles out of a total of 235,000 miles of railroad in Canada and the United States and Mexico.

I say those regulations are agreed upon by the American Railroad Association and 93 of these railroads, to get uniformity in the methods that are essential for producing safety in transportation. Now we run up against two or three difficulties in securing this uniformity. Some of the railroads do not want any regulation. They say they do not, but as a matter of fact they do. Some say, "We will not bother about that thing. Our revenue from explosives is very small." And yet it is essential that there should be cooperation, and therefore we have introduced one clause into this bill requiring every railroad in the United States to provide regulations for safety in transportation.

Another very peculiar state of affairs, as an incident of the matter at present, is that if a shipper offers a transportation company any product of any kind whatever and misrepresents that shipment for the sake of securing a lower rate, under the present legislation of the interstate-commerce act we can go for him. But if he misrepresents the shipment and pays the rate—for instance, if he offers us dynamite under the name of some other article in class 1, the first classification, the highest rate, and pays that rate—we can not touch him. There is no possibility of prosecuting or getting any claim or hold, as we understand it, on any man who misrepresents a shipment. So we have introduced a section in the bill to make it a criminal offense to misrepresent a shipment.

Mr. BARTLETT. What section is that?

Doctor DUDLEY. The bill is No. 7557, and the section—

Mr. MANN. It is section 5.

Doctor DUDLEY. Yes; section 5. Again, we are a good deal troubled in this way: Some of you may not know it, and it is not very pleasant to hear, but we have actually found men taking explosives in dress-suit cases on our passenger trains, and taking them to their places of business, through the streets, on a street car, into the Broad Street Station, and down somewhere to Delaware to be used.

We therefore want a general regulation, covering interstate commerce, to make it criminal to carry explosives on a passenger train except in very limited amounts, as section 1 provides in the proviso, which is essential for carrying on the business.



Those are the three or four essential points which it is desired to cover in this bill.

Mr. BARTLETT. You refer to samples?

Doctor DUDLEY. Yes. There is no way by which we can get the necessary data for investigations except by samples. Now, I can go into details on the situation to-day in the transportation, but it is for you to say if you want to hear them.

Mr. BARTLETT. You include in a general term "gunpowder" under the subject of explosives, do you not?

Doctor DUDLEY. We say "gunpowder or other explosives."

Mr. BARTLETT. That would include any kind of gunpowder?

Doctor DUDLEY. Yes.

Mr. BARTLETT. How much gunpowder could a man carry in going hunting?

Doctor DUDLEY. Half a pound.

Mr. BARTLETT. Then a man would have to walk or ride in a carriage or an automobile in really going hunting from one State to another?

Doctor DUDLEY. Ammunition is provided for. Fixed ammunition in any amount can be carried.

The CHAIRMAN. Would not 1 pound of gunpowder, exploded in a passenger car, cause some trouble?

Doctor DUDLEY. Yes; 1 pound of gunpowder exploded in a passenger car would give rise to considerable trouble. But in every country there is some minimum shipment allowed for laboratory purposes. Half a pound is about the smallest quantity that could be used. A man could have 10 pounds of dynamite on a car at one time, but there must be 20 half-pound packages of it; and it is an interesting thing to know that it has been found in the transportation of explosives that the division of the explosive into small packages is a great safeguard. That is one of the reasons why fixed ammunition is almost relieved from any regulations or restraint at all. Each piece of ammunition is done up by itself and placed in a little division in a paper box, so that an explosion in one does not affect the rest to any serious extent; so that it is believed that this is as good as we could do under the conditions.

The CHAIRMAN. That separation into compartments would not affect dynamite, would it?

Doctor DUDLEY. We have to have small samples of dynamite.

The CHAIRMAN. If there were 20 half-pound packages of dynamite in the same suit case and one of the packages exploded, several others would explode too, would they not?

Doctor DUDLEY. That depends on how it is done up. I do not know that that experiment has ever been positively tried [laughter], but I think it would depend on how it is done up. If each package is done up separately in several thicknesses of heavy brown paper, I do not think the explosion of one would explode all.

Now, there is a peculiar property in explosives, and that is that the more that the material is cushioned in any way the less it seems to be liable to transmit the explosion.

Mr. MANN. In time of war or trouble would this prevent the carrying of ammunition?

Doctor DUDLEY. We have thought of that, and we have assumed that in time of war military necessity takes precedence over everything, even setting aside acts of Congress.

Mr. MANN. No; it does not. [Laughter.]

Doctor DUDLEY. We have assumed there would be no difficulty arising in that case.

Mr. BARTLETT. You are judging of the present law, and you take it for granted that the President would be Commander in Chief of the Army and Navy, and that he would set it aside.

Mr. MANN. He could not set aside an act of Congress.

Mr. ADAMSON. He does not have to set them aside. He can go on without regard to them.

Mr. MANN. Would this affect artillery ammunition on railroad trains?

Doctor DUDLEY. During the Spanish-American war we were asked at Altoona whether it would be safe to carry fixed ammunition on passenger trains, and—

Mr. MANN. I am not talking about passenger trains but freight trains, filled with troops, carrying ammunition along with them, or filled with artillery. Would not the men in charge of it carry with them the necessary ammunition for the guns?

Doctor DUDLEY. I think so, because I do not see how it would be possible to do it in any other way.

Mr. MANN. Those men are not carrying it for hire.

Doctor DUDLEY. They are allowed to carry it on a freight train.

Mr. MANN. Not on any train where you carry passengers for hire.

Mr. DWINNELL. Section 4 forbids the transportation of certain explosives by a carrier in the transportation of passengers or articles of commerce by land or water, but the proviso of section 1 permits the transportation of certain explosives, providing they are not carried in the part of the vessel or vehicle which is intended for the transportation of passengers for hire. That was drawn for the purpose of covering such trains as have passengers and freight.

Mr. MANN. It will be unlawful to carry these things on any train.

Mr. DWINNELL. The language is "vehicles" instead of "trains."

Mr. SHERMAN. Then you maintain, Mr. Dwinnell, that you may have a train of four freight cars filled with the highest character of explosives and may attach to that one passenger car and carry passengers in that?

Mr. DWINNELL. I think so.

Doctor DUDLEY. There is nothing to prevent it, sir; and I would like to say for your information, gentlemen, that that is a situation that is absolutely essential and can not be met, so far as we can see, in any other way, because there is a very large percentage of trains in the mining regions known as "mixed trains," made up of freight and passenger cars.

Mr. MANN. Would this bill permit the carrying of high explosives in freight cars composing a train made up of freight cars and one or more passenger cars?

Doctor DUDLEY. The freight cars under this bill can have high explosives or any other explosive in them, and at the end of a freight train a passenger car or train can be attached, under this bill. It is practically impossible to get explosives to the place where they want to use them without such a provision, and at the same time meet the

passenger traffic that is required. In the sparsely settled portions of the country there are a very large number of branch roads that are operated only with what are known as "mixed trains," freight and passenger. Now, the bill prohibits the putting of explosives on the passenger car, but it does not prohibit the carrying of the explosives on the train elsewhere than directly where the passengers are.

The CHAIRMAN. Suppose a train of five cars, consisting of four freight cars followed by a passenger car, and the explosive, say a ton of high explosive, should be exploded in the first car; would there be any harmful effect upon the rear car, in your judgment?

Doctor DUDLEY. I should say that so small an amount as a ton, sir, could not cause any very serious difficulty to the passenger car.

The CHAIRMAN. Suppose it would be a carload, then?

Doctor DUDLEY. We had a case where a carload of dynamite was exploded in the yard at Crestline, Ohio, and the men walking along the same track about six or eight cars in the rear, with freight cars between in a continuous line, were not injured. Of course I could not guarantee you that. I would not insure you that four cars away from where a car went out everybody would be perfectly safe, but—

The CHAIRMAN. I saw once the effect of an explosion of 800 boxes—8,000 boxes—of dynamite in sticks, 100 in a box, each one wrapped in tissue paper, and every object within 100 yards of the location of that car was crushed down, not blown up; buildings and other cars, and a turntable that was 200 feet away, made of heavy 12 by 12 timbers, planked with 4-inch plank a foot apart—these timbers were a foot apart—and this planking was broken and crushed down between the 12-inch timbers, broken in three pieces all the way along. Everything was crushed downward. The theory, as a gentleman explained it, was that the atmosphere was suddenly thrown up, and then, upon the return, after the removal of the force, the weight of the atmosphere crushed everything within a distance of three or four hundred feet. I was there the next morning.

Doctor DUDLEY. Was that at Council Bluffs?

The CHAIRMAN. That was at Council Bluffs.

Doctor DUDLEY. I thought it likely, sir.

Mr. ESCH. You know what happened on your line at Harrisburg a few years ago?

Doctor DUDLEY. Yes.

Mr. ESCH. A couple of cars of dynamite were struck by a passenger train, and they blew up the whole train and killed 23 people.

Doctor DUDLEY. Yes. The question that the chairman asked me was whether in the same train, three or four cars back, they would receive the effect of the explosion. It is impossible to predict what the effect would be.

Mr. MANN. There is no prohibition of carrying these explosives in an express or baggage car?

Mr. DUDLEY. That is, as to samples. It is assumed that the express car and the baggage car are a part of the passenger equipment.

Mr. MANN. Where is the prohibition against carrying them? You call our attention to the fact that the prohibition prevents carrying them in a vessel or vehicle. I might say that the "vehicle" means one vehicle, and does not apply to another vehicle in the same train.