



# MAGAZINE

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Vol. 5

DECEMBER, 1915

No. 6

**Big Quarry Blast**

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**Delay Igniters Win Test**

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**Shooters' Christmas Gift**

---

**Baseball Stars Shoot**

---

**Dynamiting Prairie Fires**

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**Increase of  
Low Freezing Explosives**

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**E. I. du Pont de Nemours & Company**

ESTABLISHED 1802

WILMINGTON, DEL.



# Get This Gun Book!

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All popular calibres.*



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solid-top, side-ejecting safety construction; and the deep, clean-cut

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Buy the right *Marlin*! It takes only a few days to get this 128-page book into which we have put that practical information on guns and gunning which you need in buying a gun. Then it's easy to select exactly the one best gun for you.

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*The Marlin Firearms Co.*

99 Willow Street

New Haven, Conn.

## *Marlin*

REPEATING RIFLES and SHOTGUNS

## HERE IS A GUN YOU SHOULD KNOW



### THE ITHACA ONE BARREL TRAP GUN

If you want to put life and vigor into the trap shooting game, attract attention to your store and increase your gun and ammunition sales, get an Ithaca One Barrel Trap Gun. It has stirred up the trap shooting game from one end of this country to the other. Why? Because it is made especially for the trapshooter—they can point it better and make better scores.

Just place one of these guns in the hands of an 80% shooter and see him run up to 90 or 95% and you will see how high the enthusiasm will run and how it will stimulate the trap shooting game and this means more sales for you—more money in your till.

It is made in No. 4E and better grades retailing from \$85 up.

Double hammerless guns in 28, 20, 16, 12 and 10 gauge. Double hammer guns in 16, 12 and 10 gauge.

Send for large catalog and dealers' prices.

ITHACA GUN COMPANY

BOX 1

ITHACA, N. Y.






Vol. 5

DECEMBER, 1915

No. 6

GEORGE FRANK LORD, MANAGING EDITOR, 528 DU PONT BLDG., WILMINGTON, DEL.

## Decision of Character

N our schoolboy days, the first "piece" we spoke from the platform was "Decision of Character" by Judge Albion Tourgee, the famous author of "A Fool's Errand."

Although the delivery of that speech was characterized by great indecision, shaking knees, and cold sweat, the main idea, so painfully acquired, has never been forgotten.

And now, after twenty years of business life, we are strongly impressed with the great importance and obvious shortage of decision of character.

It goes without saying that *daily* decisions great and small must be made. Roughly the workers in the business world may be divided into two classes—*deciders* and *those decided for*.

A man may possess all the other qualifications of an executive, but if he lacks the courage to decide, he cannot succeed as an executive. Business offices are full of tentative idea men. All their business acts are like the April first pocketbook on the sidewalk. Just as you start to put your foot on one, it is jerked back by the string.

Executives are lonesome men. They must decide, having no one higher up to whom they can "pass the buck." They seek earnestly and hopefully, subordinates who can decide the little things on which the big decision hangs.

The ideas of the tentative man—string ideas—receive scant consideration. Matters up for investigation are referred to those who will make conclusive decisions and are always ready to back up and defend these decisions with facts and arguments that warrant them.



A few people are born with decision of character. Others may acquire it, since it is the product of thoroughness, will and courage.

If you lack decision, begin now to cultivate it.

Stop dodging issues.

Practice by deciding little things quickly and positively.

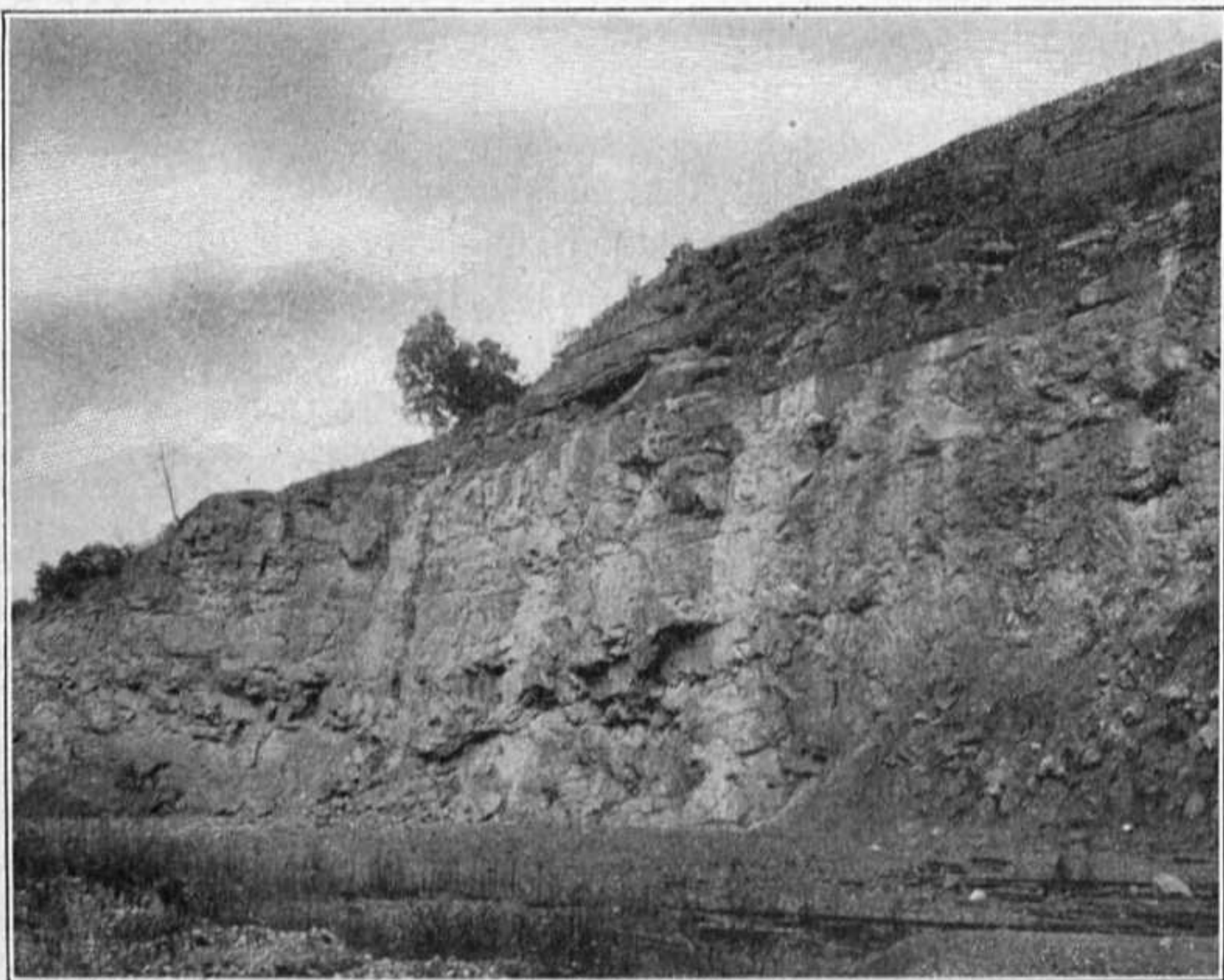
This power grows with use.

Sometimes you will decide wrong. Every decider does that, but through practice the percentage of error constantly diminishes.

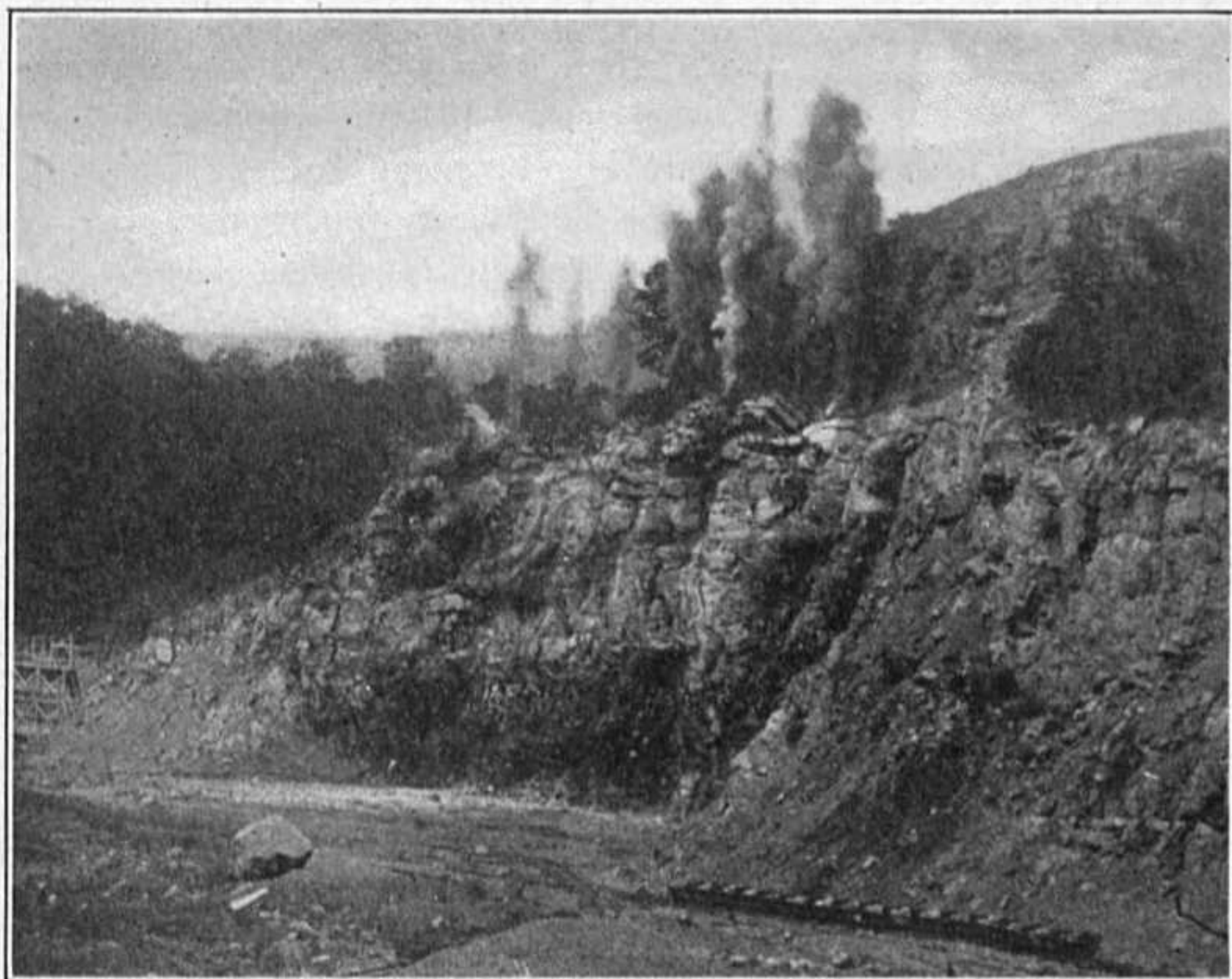
Employers will always prefer deciders who sometimes make mistakes to those who make the fatal mistake of never deciding.

### 75,000 Ton Blast

**T**HIS blast was made recently in the H. Frazier Quarry, Fort Spring, W. Va. The quarry is a horizontal bedded limestone of varying hardness. The top layers are weathered and comparatively soft while the lower strata are quite hard and white limestone. The height of the face varies from 15 to 175 feet and the quarry is being worked mostly on the full face plan. They do some bench shooting but are squaring up the face to make it vertical for "well drill" blasting.







During the early part of September a large blast was made at this quarry consisting of fifteen 6-inch holes. All but two of these holes were about 125 feet deep and extended about 5 feet below the quarry floor. The two short holes were 72 feet and 85 feet deep respectively. All holes averaged about 15 feet apart with a burden at the top of 8 to 12 feet and a burden at the bottom of 25 to 35 feet.

In each hole there was loaded from 400 to 500 pounds of Du Pont Gelatin, 60 per cent. strength, packed in 5 x 8 cartridges and on top of this was loaded from 150 to 600 pounds of Du Pont Quarry Powder, packed in 5 x 8 cartridges. In each hole was placed a line of countered Cordeau to detonate the charge of explosive. This Cordeau was held taut while the cartridges, which had been slit once lengthwise, were lowered down the holes. In ten of the holes the charges were split near the center with from 10 to 20 feet of clay stemming between the two charges. On top of the top charge there was placed about 20 feet of clay stemming. In the five holes which were loaded solid there was about 30 feet of clay stemming on top of the charge.



To each line of Cordeau was attached one No. 6 Du Pont Electric Blasting Cap with 14 foot wires, by means of a special union made for that purpose. These electric blasting caps were then connected in series, tested carefully by means of the Du Pont Galvanometer to see that all connections were properly made before connecting to the No. 4 Pull-Up Blasting Machine. Everything being found alright, the blasting machine was operated by Supt. F. R. Anderson and a most successful blast resulted.

About 50 per cent. of the stone was broken to one man size and none was thrown over 100 yards from the face. The following is a summary of the yardage, amount of explosives used, etc.

Average burden on the holes 2000 solid cubic yards.

Total burden on the holes 30,000 solid cubic yards.

Average charge of explosives per hole 900 pounds.

Total charge of explosives used about 13,500 pounds.

Total amount of rock broken 60,500 loose yards or 75,000 tons.

Average 5.5 tons per pound of explosive.

Cost of explosives and blasting supplies \$1640.00.

Cost per ton 2.2 cents.

Cost of explosives, blasting supplies, drilling and loading \$2460.

Total cost per ton 3.3 cents.





## Schramm Portable Compressor Outfit

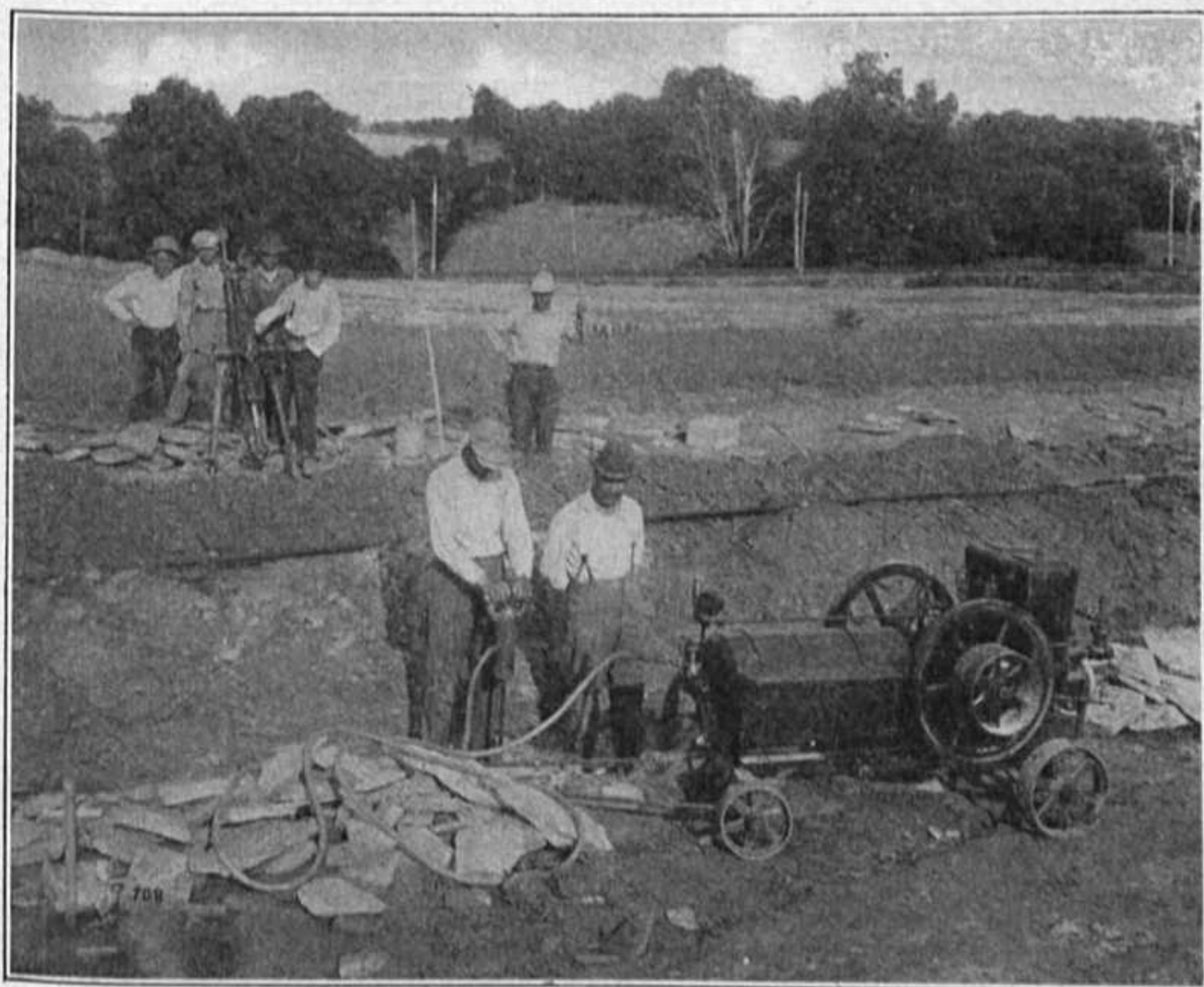
**T**HE "SCHRAMM" Portable Compressor Outfit is an evolution in the way of getting compressed air at a low cost and with a light portable outfit.

The old style portable outfits were nothing more than an ordinary stationary type of engine and an ordinary stationary type of compressor with a very inconvenient and very cumbersome type of cooling system, all bolted to a truck.

The SCHRAMM machine is assembled in the same way in which the many cylinders are combined in an automobile engine. Because the cranks are set opposite one another the machine balances itself and will stand perfectly still on the softest kind of ground and can be operated at any angle without difficulty.

There are very few pipe lines or connections on the machine and these are all rigid because the machine is hung low, and being constructed entirely of steel, stands up well in use.

The machine is entirely automatic in every way. The speed can be adjusted at will, depending entirely upon how much air is required and remains constant.





The air pressure is also regulated by hand and remains constant as required. This means that after the machine is once started it needs no further attention.

A small amount of water is needed. Only a few buckets per day. The amount of gasoline is in direct proportion to the amount of work being done. For instance the No. 2 Machine, which is more commonly used for drilling work and blasting operations, will consume three to five gallons of gasoline per day on the heaviest kind of work.

Though this machine is only rated at 24 cu. ft. of air, it is capable of operating the ordinary non-rotating drill for road construction, in ordinary quarries, for making trenches and for excavations of any kind; for drilling field-stone or for doing any kind of drilling work preparatory to blasting.

Costing only \$325, it comes within the reach of almost anybody. Even a farmer who has a rocky piece of ground can use the machine and make it pay him on the job.

The several pictures illustrate what can be expected of the machine. The first of these is a drilling operation showing how one of the No. 2 outfits mounted on a horse-drawn truck is being used at the Palisades Park opposite New York City. This contractor is drilling rock and blasting on road work.

The second photo shows the same machine on a low-down hand truck, being used in a quarry. It is apparent that any quarry can be easily equipped with a machine of this kind. Even though the quarryman has a large steam-drill, which can be only operated during the warm months in the year, owing to the dripping of water and the freezing of the pipe, it would be possible for him to roll the small machine into his place and five minutes afterwards it would be ready to go to work with his drills.

The third photo shows one of these machines being used in competition with a steam-drill. Sometimes the steam-drill is cumbersome for the ordinary contractor on the job. As the small machine weighs only 1200 lbs., it is possible to move it about very quickly. Gas companies, water companies and street contractors have bought these outfits.

For road building or rock drilling it is possible to hitch one of them to the back of an ordinary automobile for transportation.



These machines are used, of course, on many kinds of rock and the speed of drilling depends on the nature of the rock and also the care with which the operator sharpens his drills. The ordinary  $1\frac{1}{4}$  or  $1\frac{1}{2}$  inch hole put down 2 feet, will require from 3 to 5 minutes. Tests of continual operation of about 10 hours show 150 to 200 feet of holes drilled per day. This, of course, is many times the number of feet that can be drilled by hand. Comparative tests show drilling of 160 feet against 11 feet by hand.

A great convenience in the use of these machines is that when the blast is to be set off the machine can be rolled aside. The hose, of course, can be rolled up, the operator stepping back and there is no danger of pipes or anything else being damaged by reason of the rock falling on them.

Cold weather does not affect the machines in the least. The hoppers, themselves, are very small and it will take a very hard frost to do any damage.

There are no pipe lines to freeze up nor dripping water to form ice nor annoy the operator.

Every machine is sold on trial. The manufacturers guarantee that the machine will do the work or it can be returned for full credit.





## Glycerin and Soda Still Rising



LAST month we quoted glycerin at 25c. a pound as of August, 1915, as we go to press (Oct. 27) the market is 55c. a pound.

Nitrate of soda was quoted at \$2.42½ per cwt. as of August, 1915. The present market is \$2.80 per cwt.

In view of the resulting advance in dynamite prices, we recommend special attention be given to methods designed to secure greatest possible economy and efficiency.

The attention of the trade now using nitroglycerin and gelatin grades of high explosives is called to the economic advantage to them in the use of Red Cross and Monobel brands.

The Du Pont Company has found it necessary to increase the nitroglycerin and gelatin prices out of proportion to the increase on Red Cross and Monobel, due to the heavy nitroglycerin content in nitroglycerin and gelatin grades and the abnormally high price of glycerin.

Our Red Cross and Monobel grades contain less glycerin than corresponding straight and gelatin grades.

*The Red Cross and Monobel grades are fully as efficient as corresponding Straight and Gelatin grades, and in open or well ventilated underground work can be substituted.*

Gelatin grades are still being used in innumerable cases where the ventilation or the adequacy of the air supply does not make it necessary to use that class of explosives.

In nearly all cases, particularly during the winter months, the use of straight nitroglycerin grades is not warranted in view of the safety and economy of Red Cross grades at the prevailing prices.

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**It is not Du Pont dynamite unless  
each cartridge bears this mark:**







# Practical Explosives Efficiency



By F. H. GUNSOLUS

## Development of Quarries

### Part II

There are many kinds of drills used, depending upon the size of the quarry, output and character of material. Some of them are the hand hammer drill, churn drill, jack hammer drill, stationary piston drill, piston drill mounted on a wagon and well drills. The first two are very little used because they are slow and are only economical where labor is cheap.

The smallest power drill in common use is the HAND HAMMER DRILL or the JACK HAMMER DRILL. The former must be rotated by hand, while the latter rotates the drill automatically. Either will drill a bore hole up to six or eight feet deep at any angle and are very efficient and convenient. They should be used in the smaller quarries where it is possible to install a compressor, even if it is a portable one. They are always on hand in large quarries where they are used for drilling block holes and miscellaneous work. They drill a hole from one inch to one and one-half inches in diameter very rapidly. They can be run with either compressed air or steam. Electricity or gasoline power can be used to operate a portable compressor which is transported with the drill.

The large piston drills are the next in size. They are usually mounted on tripods and driven by compressed air or steam. They can be set up in almost any position either on the top or the bottom or on a ledge and will drill holes up to twenty-five feet deep at almost any angle. The diameter of holes drilled varies from one and one-quarter to two and one-half inches. It takes two men to move them around but only one man to operate them when set up.



They can also be operated by a portable compressor run by electricity. They are very efficient and are generally used where the bench method of operation is followed.

Larger piston drills, either singly or in gangs, are sometimes mounted on wagons or trucks. In these cases a gasoline or an electrically driven compressor—sometimes a steam boiler—is mounted on the truck to operate the drill or drills. Very often the truck is of the traction type which is of material advantage. They are often used where the top of the quarry is nearly level and where it is desired to drill several holes at the same time. The diameter of the holes varies from one and one-half to four inches, and in depth up to fifty feet. They require favorable conditions but give excellent results where they can be used.

One of the latest drills adopted for use in many quarries with a high face is the steam, gasoline or electric driven "well drill" for drilling vertical holes about six inches in diameter and any depth up to two or three hundred feet deep. From fifty to one hundred and fifty feet face is the most satisfactory. With these the face of the quarry must be practically vertical. A row of bore holes is drilled parallel to the face about twenty feet apart and twenty feet back from the face and a few feet below the floor of the quarry. In this class of bore holes, large charges of explosives are used per hole with two or more electric blasting caps per hole. All charges are detonated at the same time by means of an electric current, of which more will be written in a later article.

Where the face of the quarry is not over twenty feet high, small horizontal openings are made into the ledge of rock. These holes are generally driven in on a level with the floor of the quarry. They are called "coyote holes" and are quite efficient where the height of the face is not much greater than the depth of the hole.

It quite frequently happens that quarry owners having a very large quarry with a high face desire to bring down large quantities of stone in one big blast. This is sometimes accomplished by what is known as the "tunnel method." One or more tunnels from two feet by three feet to four feet by six feet are driven into the face of the quarry at right angles and on a level with the floor. When more than one tunnel is used they are from one hundred and fifty to two hundred feet apart. The tunnels range from thirty to sixty feet long. From the back end of these tunnels are driven tunnels at right angles to the main tunnel or parallel to the face of the



quarry. These latter tunnels can be of the same size but are generally smaller when the main tunnel is quite large. Every fifteen to thirty feet in the lateral tunnels are sunk "sumps" from two to four feet below the quarry floor. Into these "sumps" are loaded the charges of explosives, which vary from five hundred to four thousand pounds per "sump." The space between the "sumps" is most carefully and thoroughly filled solid with tamping material, which can be taken from the material excavated in driving the tunnels. Into each charge of explosives is placed from two to six electric blasting caps. These are generally not connected together until the wires reach the mouth or back end of the main tunnel. The wires should be protected by running them through a pipe, or covered with a heavy board, the former being preferable, as the pipe can be suspended from the roof of the tunnel and out of every one's way. If no protection is given the wires, they should be tested very carefully as the loading of the charges of explosives and the placing of the tamping material proceeds every few feet to note whether any wires have been broken. After all charges are in place, the lateral tunnels fully tamped, then the electric blasting caps should be connected in parallel—providing a power current is used—to heavy leading wires, which latter are carried to the mouth of the main tunnel through a pipe for protection. This main tunnel is then carefully and thoroughly filled with tamping material. If the blast is a very large one, it is well to fill the last few feet of the main tunnel with concrete. When everything is ready the wires are run to the source of the power current and the blast is fired in the usual manner. While this method requires considerable work in the preparation, loading, tamping, etc., yet there are many times when it is quite economical.

If some of the methods in this article are not understood or if more information is desired regarding them, our Technical Division will be very glad to consider the questions with you if you will write them direct.

Later articles will dwell more with the explosive end, giving information as to the explosives and blasting supplies that are used in quarry work.

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each cartridge bears this mark:**





## Economy of Delay Igniters



ON July 11, 1915, the Dean Iron Company, of Hibbing, Minn., started to sink the North Eddy Shaft, which is 8 feet wide by 12 feet long. For the first 35 feet, there was very little blasting, after which they struck a ledge of taconite. They used Du Pont Gelatin, 60 per cent. Strength throughout. At first they detonated the charges of explosives with the instantaneous Electric Blasting Caps and fair results were obtained; several sets were taken out at an average rate of about  $2\frac{1}{2}$  feet per day of 24 hours. At this time, the Delay Electric Igniters were brought to their attention and it was decided to give them a trial.

The holes were generally drilled so as to blast the whole cut at one time, that is, they drilled eight holes, four each side of center pointing towards each other at the bottom, and as many holes as were thought feasible to remove the dirt from the sides and corners. The first eight holes or cut holes were discharged with the regular Electric Blasting Caps, while in all the other holes, they used the Delay Electric Igniters; the first delay nearest the center and the other delays at sides and under timbers. In nearly every instance after the blast the rock at the bottom was thrown into a mound shaped pile in the center of the shaft, leaving the ends and corners exposed. They blasted as many as 25 holes with one charging, taking out the bottom cut complete and in a number of instances combining with it a number of popholes to make room for timber. In this way, much time was saved by the miners, as a whole cut and pops could be discharged at one operation and with as good results as when cut holes were made and blasted and then after the interval it took to clear the shaft from smoke, drill the balance of cut and again blast.

They averaged about  $3\frac{1}{2}$  feet per day in the taconite, some of which was quite hard and unbroken, and in the quartzite at bottom of shaft where they made room for pocket and skip-pit.

In all their work, they obtained very good results, using in all about 300 of the Delay Electric Igniters, together with the regular Electric Blasting Caps and without a misfire, except in one instance where it was found upon investigation that the fuse had been



broken off while in the act of tamping the hole. In all, they went through 120 feet of taconite, slate, some paint-rock and quartzite, making an average speed of  $3\frac{1}{2}$  feet per day while sinking, which included all the placing of timbers and stations for ladders.

### Delay Electric Igniters Win Test



THE following is a report of Salesman C. M. Russell of our Denver Office:

J. F. Nebel Mining Co., Lyons, Col. "Was pleased to find that Delay Electric Igniters have carried the day here against fuse and caps. The original order was for a 'donation' of fifty, which I demonstrated. Later an order for a thousand was placed and now I find that the use of caps and fuse has been given up.

"Competitive tests were made, the day shift using electric igniters against the night, which retained the old method. These tests lasted 30 days and the results obtained with the igniters proved so far superior that they were adopted at once.

"All the work here is drifting, stoping and tunnel work. Wet conditions prevail in some parts of the mine. Vernon expects to place another order the last of the month, specifying 10-inch fuse lengths this time. His present enthusiasm as compared with his indifference at the time of the first tests is as good a boost for the delay igniters as one should wish to see."

Ask any of our salesmen to explain these to you. They will be more than glad to go into the matter thoroughly and show you just how they are used and the many advantages. Try them and be convinced that they will do what we claim.

### Increase of Low-Freezing Explosives



YEAR ago we were selling eight low-freezing brands: Du Pont Gelatin, Red Cross Straight, Red Cross Extra, Monobels 4, 5 and 6 and Carbonites 5 and 6.

Now we are selling in addition: Du Pont Quarry Powder, Red Cross Farm Powder, Red Cross Stumping Powder, Du Pont Stumping Powder, Du Pont RRP—F, FF and FFF, Red Cross, Repauno and Forcite Gelatins.




This increase had been due to increased demand following the successful and efficient use of our first low-freezing grades, reducing or eliminating thawing costs and thawing accidents, and expensive misfires due to chilled explosives.

Now is the time to adopt low-freezing grades, if you are still using the higher freezing types. The increased cost of explosives may be largely or wholly offset by the material economies in time, money, and labor resulting from the use of low-freezing grades.

While their good points are most apparent in cold weather, the majority of users prefer them all the year, as they are always safer to use than straight dynamites, because less sensitive to the accidental shocks of handling.

### Yale Wins Intercollegiate Shoot

By STANLEY F. WITHE

HE first championship shoot to be held under the auspices of the recently organized Intercollegiate Trapshooting Association took place Saturday, October 23d, over the traps of the Princeton Gun Club. Five-men teams from Cornell, Yale, Princeton and Dartmouth shot a 100-bird program. The match was closely contested, Cornell leading until the last event when Taylor of Yale, missing but one target of his 25, gave the Elis the victory by a margin of five points. The final scores were Yale 366, Cornell 361, Princeton 333, Dartmouth 282. Levis and Chisholm of Yale, were high men, each breaking 83 out of a possible 100. Caesar, with a score of 78, was high man for the Tigers, while Ryan, with a total of 79, was high-man for Cornell. The championship trophies awarded the members of the Yale team were solid gold watch fobs, the pendants of which were replicas of clay targets.

Interest in the shoot was unusually keen, it being the first meet in which Cornell has been represented. The arrangements for the shoot were perfect in every detail and the events were run off in true Grand American style. Though shooting conditions were ideal, a high gale, which tossed the targets about like feathers, prevented high scores.



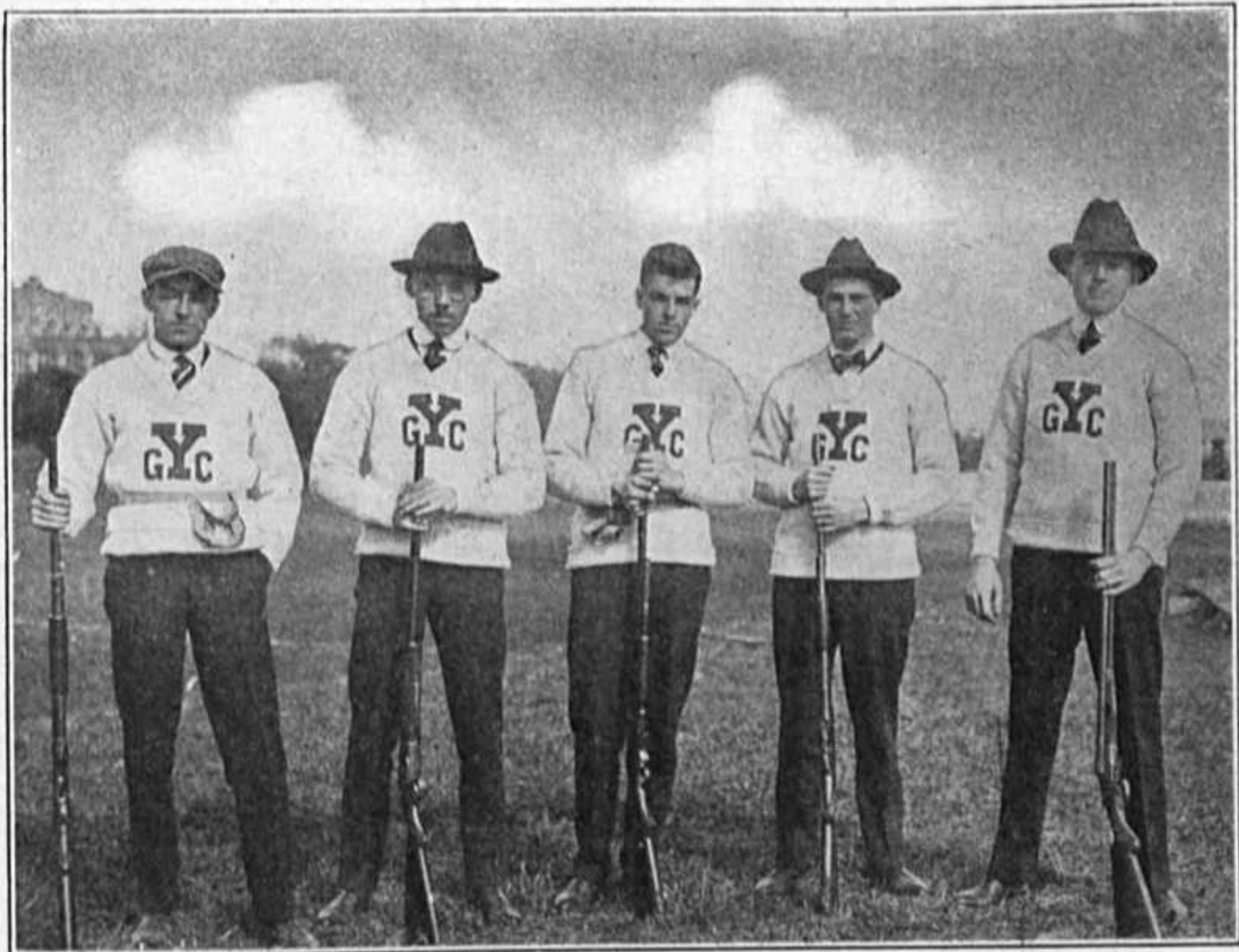
The summary was:

YALE.	
Lynam .....	75
Levis .....	83
Chisholm .....	83
Casselberry .....	53
Taylor .....	72
<hr/>	
	366

CORNELL.	
Von Lengerke .....	78
Ryan .....	79
Coleman .....	69
Dewitt .....	70
Walden .....	65
<hr/>	
	361

PRINCETON.	
Reed .....	72
Turner .....	67
Shea .....	63
Hewett .....	53
Caesar .....	78
<hr/>	
	333

DARTMOUTH.	
Melvin .....	60
Huntress .....	47
Campion .....	55
Hoard .....	77
Prendergast .....	43
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	282



It is not Du Pont dynamite unless  
each cartridge bears this mark:





# Mail Order For Du Pont Explosives

Hereafter this form will be printed in each issue of the Du Pont Magazine for the convenience of the trade. Frequently customers want explosives at times between salesmen's calls. This form provides a handy means for ordering.

If you are uncertain as to the kind required, describe the work to be done, noting especially whether it is dry, damp, wet or very wet, also nature of rock or soil, and the extent of the work.

If you are a retail buyer, give name and address of dealer.

If you are a retail dealer, give name and address of your jobber.

Mail order to our nearest office (list published in each magazine).

E. I. DU PONT DE NEMOURS & COMPANY,

Date

(Write here location of office addressed)

Ship to

(Concern's name)

Per

(Your name)

P. O. Address

Freight Station

County

State

via

R. R.

My dealer is

P. O.

My jobber is

P. O.

The commodities indicated below on our account, at current schedule:



The commodities indicated below on our account, at current schedule:

PRINCIPAL BRANDS	% STRENGTH	QUANTITY
DYNAMITES		
Red Cross Extra		
Red Cross Farm		
Red Cross Stumping		
Red Cross Gelatin		
Du Pont Straight		
Du Pont Quarry		
BLASTING SUPPLIES		
Du Pont Blasting Caps No. 6		
Charter Oak Fuse		
Du Pont Cap Crimpers		
Du Pont Electric Blasting Caps No. 6	.....feet length	
Du Pont Blasting Machine No.	.....holes capacity	
SPORTING SUPPLIES		
Du Pont Black Sporting		
Du Pont Shotgun Smokeless		
Du Pont Hand Trap		

Remarks: .....

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# SPORT AT THE TRAPS



By E. R. GALVIN

## A Big Boon for Trapshooters



RAPSHOOTING is now possible everywhere and for everybody.

We have made it possible for trapshooters, dealers and jobbers to purchase clay targets for trapshooting in lots of 100.

Targets in lots of 100 is an idea that will appeal instantly to everyone interested in trapshooting, and means that the sport can be enjoyed anywhere, everywhere and whenever sportsmen are so inclined.

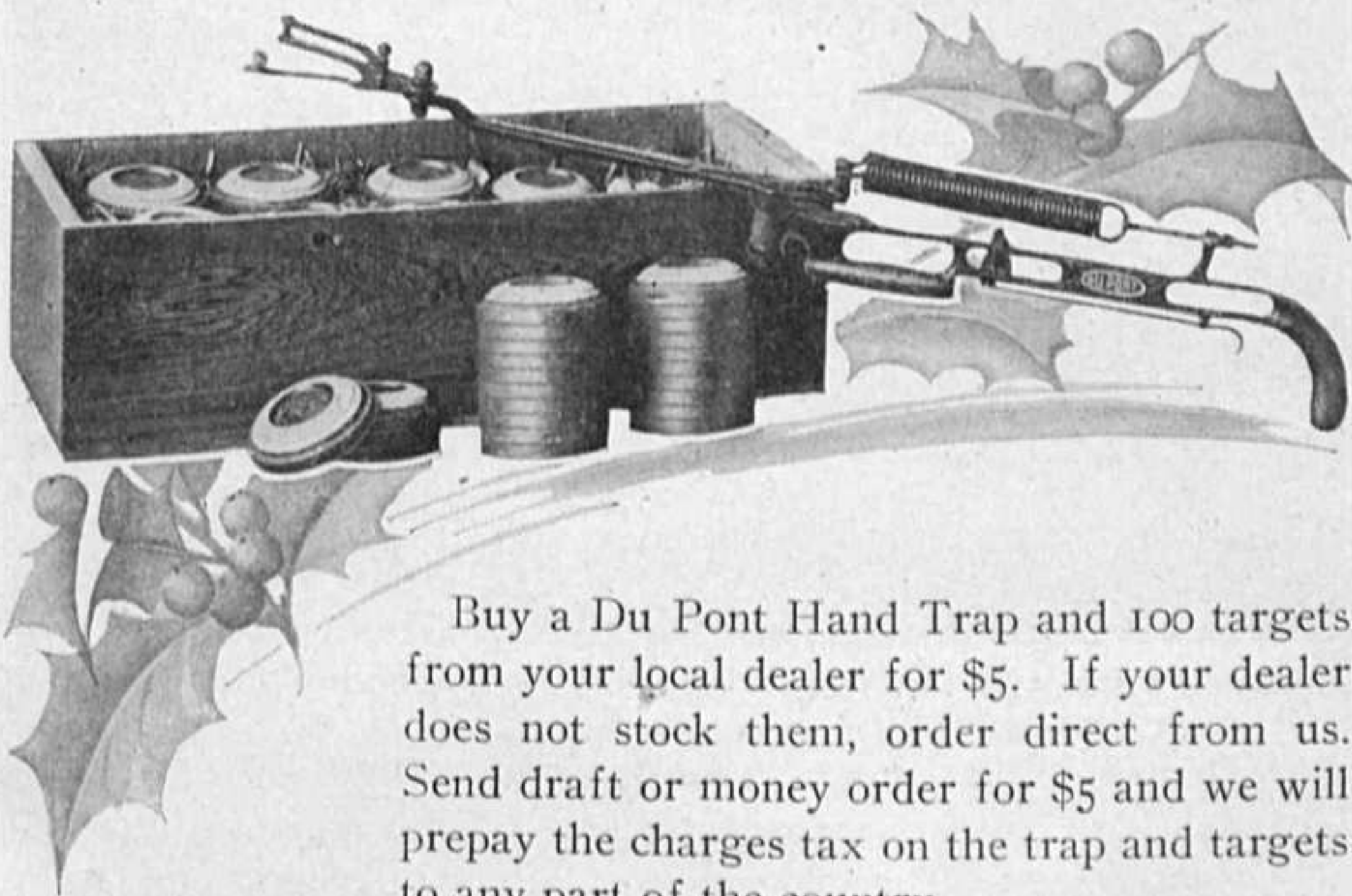
On hunting parties, automobiles and boating trips, where economy of space and weight of equipment are important considerations, a Du Pont Hand Trap, a box of targets, a gun and a supply of shells can always be accommodated, and will mean a difference between plenty of sport and pleasure, or a monotonous round with little or nothing to occupy the minds and hands.

Mothers, sisters, sweethearts wishing to send a most acceptable Christmas present to a sportsman, can select nothing which would please him more than a Du Pont Hand Trap and a box of 100 clay targets. The same applies to fathers, brothers and sweethearts selecting a present for a sportswoman—of whom there are many. Give "her" a hand trap and 100 targets, and her pleasure will be ample reward.

Men and women who know the delights of trapshooting, and wish to enlist the interest of friends who are backward about "breaking in" at the gun club, can overcome their diffidence by starting them off with a hand trap.



We have made several trial shipments of clay targets in packages of 100 to all parts of the country, with less than 2 per cent. breakage, which indicates the very satisfactory nature of the style of packing we are using. Blue Rock targets are the kind used.



Buy a Du Pont Hand Trap and 100 targets from your local dealer for \$5. If your dealer does not stock them, order direct from us. Send draft or money order for \$5 and we will prepay the charges tax on the trap and targets to any part of the country.

Order that Christmas present for "Her" or "Him" now.

### The Beginners' Shoots

ONE of the greatest events held in the trapshooting game in recent years was the Du Pont First Annual Beginners' Day Event, in which more than 500 gun clubs participated.

There are still a few clubs to hear from yet, but the returns received indicate that nearly 7500 men and women shooters competed for the fob and spoon trophies offered as prizes for the occasion by the Du Pont Company. Of this number, it is pleasing to note, more than 600 were women. As near as can be estimated about 275,000 shots were fired by the beginners for the trophies, certainly a hearty endorsement of the idea.

The honor of having the greatest number of beginners participating at its traps goes to the Pahquioque Rod & Gun Club of which Mr. E. H. Bailey has been secretary for several years. Through Mr. Bailey's efforts 93 men, and 43 women, or a total of 138 beginners shot at the Pahquioque club, which number was





BEGINNER'S DAY, AUG. 18, AT DANBURY, CONN., PAHQIOQUE ROD & GUN CLUB

more than double the number secured by any other of the 500 clubs participating. We are informed that a regular wave of shooting struck Danbury which will make the club at that point one of the best in the country.

Portland, Ore. and Wilmington, Del., shared second honors, the clubs at both points registering 73 beginners competing for the prizes offered. At Portland especially the beginners' shoots have done much to increase the attendance at the regular shoots, and



BEGINNERS AT CHAPMAN, KANSAS



those who shot as beginners a few weeks ago are now bringing out their friends and getting them started in the "Sport Alluring."

Chapman, Kan., also deserves especial mention for their activity in getting out 38 women shooters. A real big event was made of the Beginners' shoot at that point, and a picnic held in connection with it. The ladies left the shooting grounds feeling that they had become acquainted with the best sport in the world, and also with a feeling of understanding for the attraction the men folks found in trapshooting.

Sporting Life Magazine referred to the Beginners' Shoots as the rejuvenation of trapshooting, and the results indicate that we need not worry for the future of the sport which can muster 7500 new adherents in one month.



There is a moral lesson also in the event. Any gun club that feels itself going back ought to realize by this time that new life and new blood are needed to bring the spirit of enthusiasm and interest back to normal. Every day is beginners' day. Hold a shoot for beginners. Get the members working for the success of the affair, and before long the club will be running along like a piece of well oiled machinery, and with prospects of a brighter future than ever.

It is not Du Pont dynamite unless  
each cartridge bears this mark:





## A Good Indian

**OUT** on the Pacific Coast Henry Everding, of Portland, Ore., is known as a "good Indian." A thorough sportsman, and an all-around good fellow, he is deservedly popular with all who know him. Mr. Everding is also an ardent trapshooter, can turn in a good score with a frequency that betokens expertness, and an earnest worker for the best interests of the sport of trapshooting.

As marks of esteem, his friends have honored him with the Presidency of the Portland Gun Club, and the Pacific Indians, and he is also high in the councils of the Northwest Sportsmen, and his devotion to the causes represented by these organizations has resulted materially to their benefit and advancement.

We take our hats off to Mr. Henry R. Everding, a "Good Indian," good sportsman, and all around good fellow.



## Trapshooting Tour of Baseball Stars

**T**RAPSHOOTING and baseball are two of America's premier sports that have much in common. Most men like to shoot, and the majority of men are baseball "fans." We venture to say, also, that more men are interested in trapshooting and baseball than in any other two outdoor sports.

Men like Fred Clarke and Hans Wagner of the Pittsburgh National League Club, Jake Daubert and Nap Rucker of the Brooklyn Nationals, Harry Davis of the Athletics, Chief Bender, formerly of the Athletics and Baltimore Federals; Louis Malone, who broke in this year with Connie Mack; Frank Baker, the



renowned holdout; Bob Shawkey of the Boston American League and World's Champion teams, Christy Mathewson and Chief Meyers of the New York Nationals, Otis Crandall of the St. Louis Federals, Ty Cobb of the Detroit Americans, Roger Bresnahan, manager Chicago Cubs, and many others are all ardent trapshots.

To provide an event at once unique and interesting to the millions of shooters and baseball fans throughout the country, we have arranged with Chief Bender, Harry H. Davis, Otis Crandall and Christy Mathewson to make a tour of several of the large Middle Western and Eastern cities, giving trapshooting exhibitions. The following route will be followed:

Nov. 8th Richmond  
Nov. 9th Baltimore  
Nov. 10th Pittsburgh  
Nov. 11th Cincinnati  
Nov. 13th Indianapolis  
Nov. 14th St. Louis

Nov. 15th Kansas City  
Nov. 16th Omaha  
Nov. 17th Des Moines  
Nov. 18th Minneapolis  
Nov. 19th Milwaukee  
Nov. 20th Chicago

Nov. 21st Chicago  
Nov. 22nd Toledo  
Nov. 23rd Detroit  
Nov. 24th Syracuse  
Nov. 25th New York City  
Nov. 27th Boston



MATHEWSON



DAVIS



At each stop a match will be shot against a team of local amateur shooters, which are expected to be exciting affairs, and which the public is invited to witness. Word has been received by each club which will entertain the visiting ball players that no admission will be charged to see them shoot, and that anyone desiring to participate in the shooting may do so.

Early indications are that this trip will be one of the big sporting events of the year, and from coast to coast great interest in it is apparent, and extensive plans are being made in almost every city for the proper entertainment of the visiting stars.



BIG CHIEF BENDER AT LEFT,  
CRANDALL AT RIGHT.  
SHOOT-FANS CAN SOON SEE  
HOW ALL THESE DIAMOND  
STARS LOOK IN SHOOT-  
ING CLOTHES.

---

*That's Different.*

"I know her father does not like me. He wants me to go to work in his factory."

"Well, then, why don't you prove your worth by going? Then there will be wedding bells and a happy ending."

"I don't know about that. It's a dynamite factory."—*Louisville Courier-Journal.*





# FARMING WITH DYNAMITE



By FRANKLIN W. WILSON

## No Farmer Too Poor to Use Dynamite

**W**HEN we first inaugurated our agricultural campaign in the old-settled Eastern States we had some difficulty in convincing our own salesmen in this territory that dynamite could be sold to farmers in quantities that would make the proposition commercially successful. However, we were selling millions of pounds to settlers in the Northwest for land clearing, and we were confident the idea could be introduced in the East. Now there isn't a salesman on our staff that isn't thoroughly convinced that explosives are salable in large quantities in every section of the country and to the poorest farmers. They are recognized as necessities and necessities are salable to practically everybody.

Just now our difficulty is to convince professional blasters that farm owners are good prospects for their services and for our products. A good many of them have already convinced themselves and have made considerable money while doing it. Others still hold to the opinion that the land owners in their particular territory are too poor to employ them.

In this connection, we want to quote from a letter recently received from one of our salesmen in Montana. He writes:

"From an agricultural standpoint, Montana has no equal. There are thousands of uncultivated acres in the state. The reason for this is that the people who own them are holding the land as a speculation or have very little money with which to clear it. Nevertheless, I am surprised each year to see what the poor farmers are accomplishing in the line of clearing and cultivating



their lands. I predict that within the next three years, the consumption of explosives for agricultural purposes will more than double in this region."

If that is true of Montana, it is even more true of practically any other part of the country because there isn't a section of the United States where there are more poor settlers who have taken up cut-over lands than in Montana. These people need dynamite the worst way in order to make their farms productive as soon as possible. Anything the people need so badly, they are sure to find a way of obtaining.

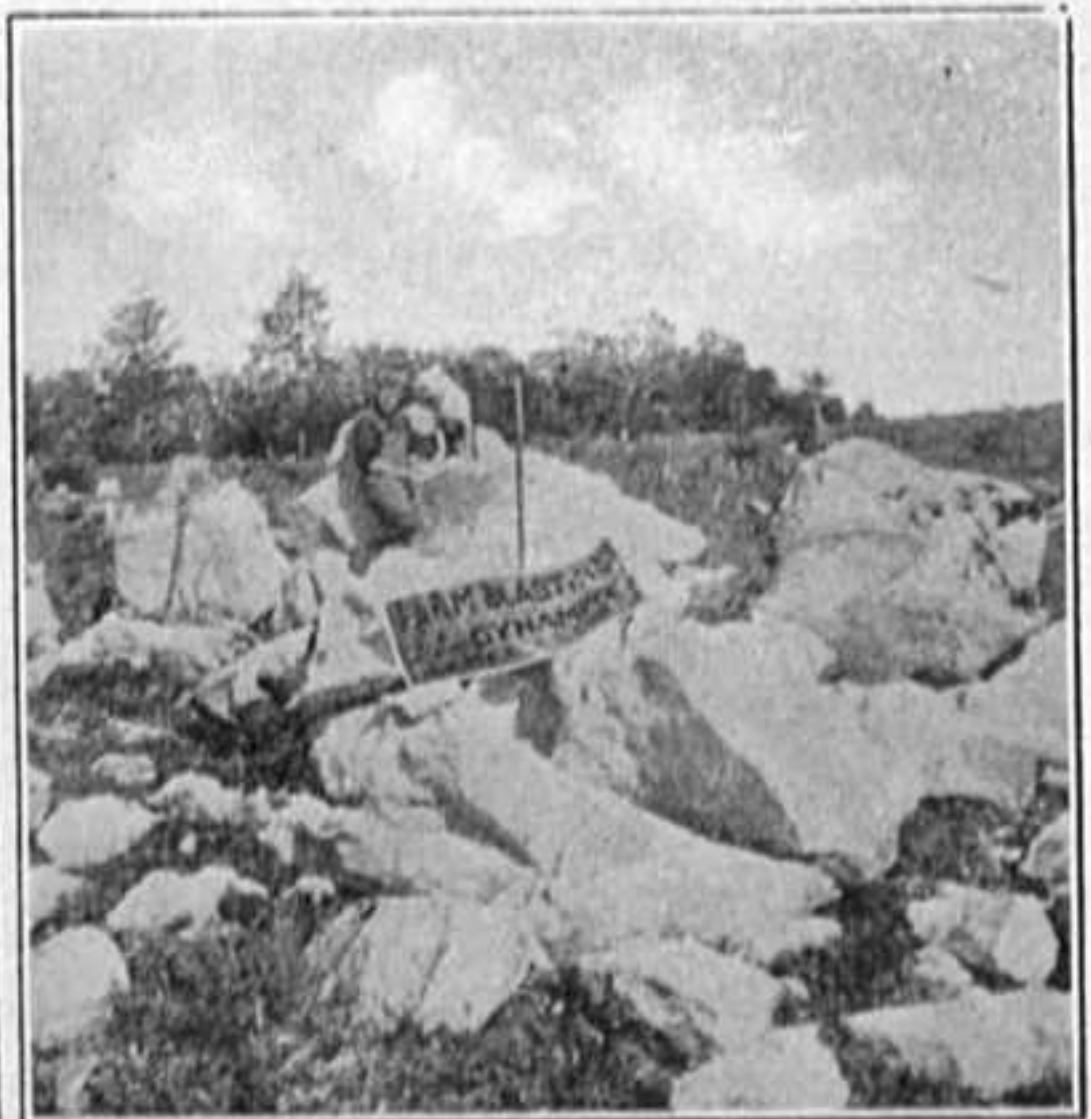
### Boulder Blasting in Vermont



THE accompanying pictures show some of the work of Blaster Roben of Vermont.

The first view is of a stone that measured 17 ft. by 14 ft. with a rise of 4 ft. 10-inches above ground and 5 ft. underground and estimated as weighing 95 tons.

The first shot was put in a side hole 6 ft. deep and loaded with 3½ lbs. of 60 per cent. Straight N. G. dynamite. The charge was detonated with three electric blasting caps in three different positions in the hole. This shot threw out part of the rock and left some big seams. These seams were then mudcapped. After this, several of the larger pieces had to be drilled with 6-inch holes and loaded with small charges of the Straight N. G. dynamite. The work left the boulder as shown in the other view.





There is a great deal of boulder blasting work to be had by wideawake blasters in New England if they would take the trouble to convince the land owners how quickly, easily and cheaply the land could be cleared, especially if they were shown that a few crops would entirely pay for the clearing work. Possibly one crop might pay the entire bill.

### Dynamite to Stop Prairie Fires

**S**OUNDS queer, doesn't it, to suggest dynamite to stop a fire? However, it has been successfully used to blast ridges of fresh earth in the path of forest fires and for years, it has been used to blast down buildings in the path of conflagrations in cities.

Mr. Gove, the Massachusetts blaster, suggests an extension of the idea. He has used dynamite to stop a prairie fire. This is even simpler than stopping forest fires or conflagrations in cities because it is only necessary to blast a few feet of shallow ditch across the path of the fire. The fire will not ordinarily cross the fresh moist earth thus thrown up and dies out for want of fuel to feed on.

### Du Pont Explosives Most Salable

**B**LASTERS using Du Pont explosives have a great advantage over blasters using competitive goods. No other explosives are so well advertised and so well known and so universally demanded by customers employing agricultural blasters.

This is shown by the experience of Mr. Smalley, a New Jersey blaster. We recently sent him a yellow slip on a prospective customer in his territory who desired 2500 tree holes blasted. A blaster using competitive explosives was on the job ahead of Mr. Smalley but in spite of that, the latter secured the job even at a price a quarter of a cent a hole higher than the competitor had quoted, because the customer preferred the well-known Du Pont explosives.



It certainly pays a blaster to be listed with the Agricultural Division of the Du Pont Company. If there is a blaster in the country who uses competitive goods and doesn't know why this is so, we invite him to write for our Agricultural Blasting Booklet which explains how we co-operate with and assist blasters using our goods.

### Tree Planting on a Large Scale



R. DEAN, of Delaware, recently planted four thousand apple trees in blasted holes.

His customer had ordered the trees for fall delivery. He had not considered planting them in blasted holes at the time Mr. Dean first approached him. In fact, he was skeptical of the benefits that might accrue from blasting because he had previously planted a large number of trees in the same locality which were doing fairly well and couldn't see why he should go to the extra expense of buying explosives.

At first, he flatly refused even to consider it. However, Dean is in the blasting business to make money. With him, "No" doesn't necessarily mean "no" until the bulldog has chased him off the premises minus a section of his trousers. In this case, the bulldog failed to appear and by persistently presenting the merits of his proposition, he finally landed the job.

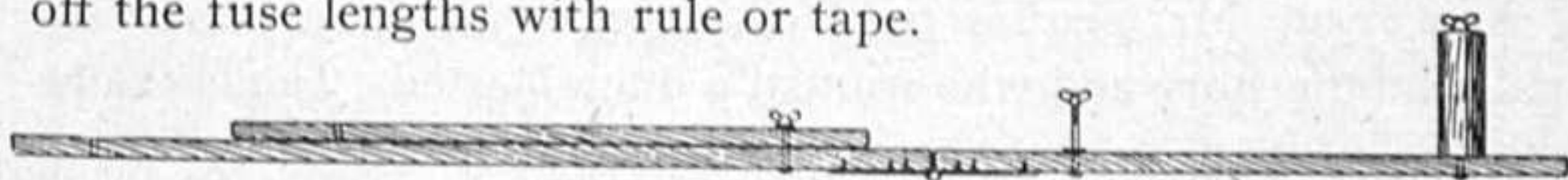
It was late in November. Winter weather was due to set in at any minute. The trees were on the ground and had to be planted immediately.

Putting down four thousand holes with an ordinary pointed bar and sledge in hard soil was a task of gigantic proportions; moreover, it was too slow. To overcome this difficulty, Mr. Dean and his assistant, both of them practical mechanics of an ingenious turn of mind, invented a power boring machine. First a light farm wagon was stripped down to the running gears. On this were mounted a  $2\frac{1}{2}$  horse-power gasoline engine and the turning appliances used to operate the soil auger. With this machine, they were able to put down as many holes in a day as thirty men could have punched with bar and sledge. This enabled them to finish the work in a little less than fifteen days of nine hours each.

The orchard site was first plowed. The furrows were 30 ft. apart each way. The trees were planted at the intersections.



In order to make speed, Mr. Dean also devised a fuse cutting and measuring board for use on this job. By means of this the tangling of the fuse was avoided as was the necessity of measuring off the fuse lengths with rule or tape.



The roller at the left holds the roll of fuse. The tall thumb screw is set for one end of the desired fuse length, the end of the board being the other limit.

The cutting and capping of the fuse was done indoors on a rainy day. The cutting of the sticks of dynamite into halves was also done away from the job. The capped fuses and the dynamite were then carried on the job by two different men as it is, of course, not considered good practice to carry caps and dynamite in the same carrier.

The explosives used for the work was Red Cross Extra 20 per cent. dynamite—a half cartridge to the hole.

Since doing this work, Mr. Dean has perfected a number of improvements in the boring machine and says it can now be built for about \$35 or \$40. He says that any ordinary  $2\frac{1}{2}$  horse-power gas engine can be used to drive it—in fact, that a  $1\frac{1}{2}$  horse-power engine would do it but the  $2\frac{1}{2}$  horse-power is better. The engine isn't permanently attached to the machine but can be conveniently detached from the other apparatus and used at any time for any other farm work. The whole apparatus can be easily mounted on the running gears of any light wagon. Therefore, the only expense to a blaster or farmer owning a gas engine and a horse and wagon would be for the boring apparatus itself.

The machine can also be used for boring post holes, subsoiling holes, etc., and Mr. Dean feels that it will pay for itself on any job where at least a thousand trees are to be planted or a thousand subsoiling holes bored.

### Tell the Papers What You Are Doing



RECENTLY Mr. Shaffer, an Illinois blaster, shot a big ditch, which was very successful. He wrote up a nice description of how the work was done, giving the costs,



size, amount of explosives used, grade, etc., and sent it to the Engineering Record of Chicago. They were very glad to get it and published it, paying Mr. Shaffer for it.

As a result Mr. Shaffer received an inquiry from a party who had read the story and who wanted a ditch blasted. Doubtless he will receive many more offers of work from it because the Record is widely read by engineers and men having engineering work to do.

It certainly pays to advertise, especially when instead of it costing the blaster anything, he is paid by the paper for his article.

If blasters will furnish the details of important jobs that they do, we will be glad to write them up in the shape of articles and send them to papers that will publish them, but it is usually better for the blasters to send their articles to the papers themselves, if they can write them up in proper shape, as editors are much more likely to accept them if they get them direct from the author. When we send them they feel we are trying to work them for free advertising and hence are not as likely to publish them.

To receive attention from editors articles must give all details as to cost of work, kinds and amounts of explosives used and plain descriptions of how work was done.

### Money in Blasting



R. CROSBY, an Illinois blaster, writes:

"I have been in this locality 29 days during which time I have used nearly 4000 lbs., of Du Pont dynamite. I have made \$671.67 clear money in these 29 days except my board and railroad fare which will not exceed \$70.

"I have opened the eyes of road superintendents and road promoters who say that I am the only blaster of a large number who have tried here that has made good on road work. I am being recommended all over this section by the presidents and vice-presidents of various road promotion enterprises."

Mr. Crosby asks if we don't think \$601.67 clear profit in 29 days pretty good earnings for a blaster. We do. There isn't any question about there being good money in the blasting business for a hustler like Mr. Crosby. And there are many roads.



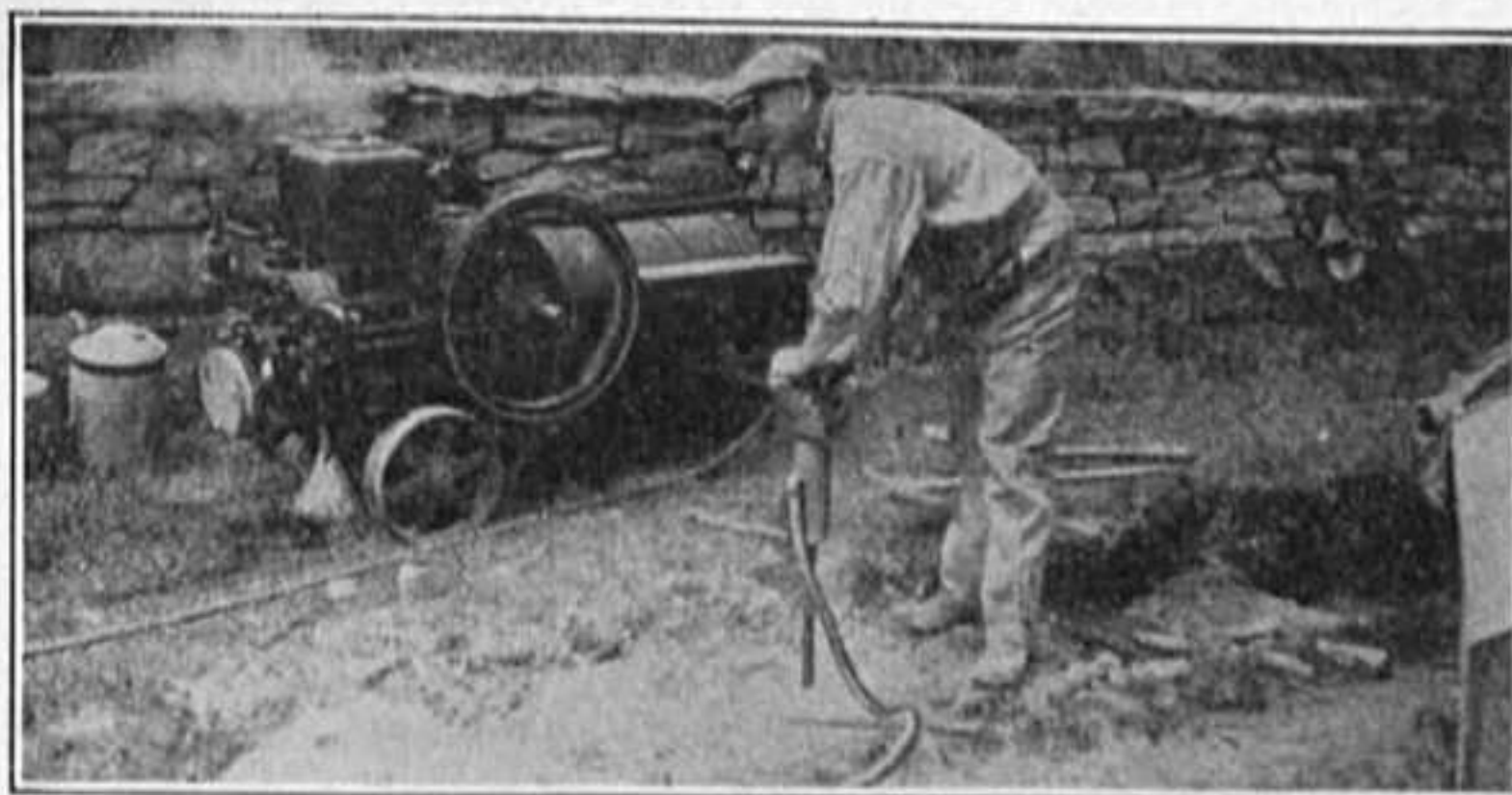
## Tree Planting Work Easy to Secure

**T**HERE are very few sections of the country now where tree planting in blasted holes is not a thoroughly established institution.

Since nurserymen have taken hold of the idea and recommend it to their customers, nearly all fruit growers desire their trees planted by the new method, and planters of shade trees who desire rapid growth are following suit.

Mr. Dawson, a Delaware blaster, wrote us recently that he had met one man who was so impressed with the idea of tree planting with dynamite that he dug up some trees in his yard that had been set out a year previously and had Mr. Dawson replant them in blasted holes.

We still have on hand plenty of Orchard Booklets, generally considered the strongest piece of literature we have ever put out, and additional copies of which we are always glad to send blasters for distribution if you will request them.



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