

Carlisle's

CORRECT SHOES

X-RAY FITTINGS

for men, women and children

Phone 881

420 Norfolk Avenue

Norfolk, Nebraska

February 14, 1957

G. Harry Stine  
1100 Circle Drive  
Las Cruces, N. M.

Dear Harry:

It was good to talk to you last night, and like I said, I knew I would think of things to day that I wanted to say, last night. Does that make sense???

First off, I will tell you about a 2 stage Mark II that I shot this morning--early this morning!! I got up early and loaded up a 2 stage booster--see the CRUDE sketch. It was still dark and COLD when I got out to my private 'White-Sands' and there was a stiff wind blowing. But I touched her off, and it went plumb out of sight. I stood looking up where I last saw it, and pretty soon it came into sight--just a little red dot, then bigger. I had to drive clear to the end of the runway to get it back. We have a big airport that will take anything up to a B-29--and the runways are l o n g. Had there been any more wind I would have lost it sure.

Another thing--the plastic chutes get a bit stiff when it is down from 30 degree es. and some times they do not open full. But this one was clear open--so my guess is that it was still going up when the chute got pushed out of the body.

About the chutes---My early models had 6 sided chutes--which looked swell and worked fine. But they were more time taking to make--andso I went to the 4 sided chute--and have never had any trouble.

Like I told you on the phone--and in my letters--- the Rock-A-Chute as you see it now was made as a 'toy', and therefore I make it as sturdy as possible.

There are dozens of ways to make it lighter--for one thing do away with the guide tube on the side. Shoot it from a 6 pronged stand (prongs to keep the fins steady--do you get me????). Have the prongs of smooth dowel rods.

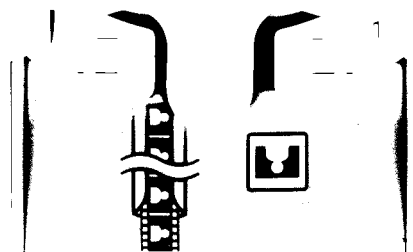
In fact the thing will take off right off its fins and go straight up--IF there is no wind to tip it. This procedure is not advised--except to people like you and me!!

I have even loaded units to give a boost--then slow down--then give another boost. The effect in flight is to have the thing take off, straight up--then as the slow charge burns the thing slows down and tilts to one side or another (not always predictable)--then a fast charge takes over, and away she goes--an an angle every where from parallel to the earth or 45 degrees. It is sort of fun to see it slow down and tilt--then take off with a burst of speed again.

I had quite a time getting a tape to hold the shroud lines on the plastic. The Minn. Minning and Eng. Co (scotch tape people) were wonderful to me. They suggested a plastic tape --polysomething or other--and it is ok. However, I have since gone to using the white plastic tape like I sent you, and have had perfect results. In long storage it stays flexible.

*Normal Shoes of All Types :-: Prescription Shoes :-: Split Size Fittings*

P.S. Comments by you and your friends are appreciated!



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I will load you up a batch of the fff G units. My guess is that you are not too hot for any of the 'Light' loads.. ha. The charge 3 and 4 are ok for the amateur--and for small areas. But for super shots with lots of open space the more powerful units I realize are the best.

I will also make up some 2 stage units for you to try. You will have to add a few lead balls to the nose of the Mark II, if you launch it with a 2 stage booster, as the extra booster makes her a bit tail heavy. You can dope out the aerodynamics--I get lost even using such big words!!

I was sorry to hear that the Charge 7's fizzle. I almost did not include them in the stuff I sent, as I had a couple of them burn through. But since I had them all loaded, I put them in. The reason, I am sure, is that there was too much booster in them--loaded to near the top of the tube. The pressure of the rammer makes the tube bulge--and a bulge to near the top of the tube is no good, as the tube then will split. So forget I ever sent any of the 7's!!

On rare--very rare-- occasions I have had them firecracker. But the reasons for this are avoidable also. Sometimes I get the vent too deep into the booster charge--too much powder gets lit at once--and blooie.

O Yes----I have wondered what kind of thrust you would get if the vent was V shaped. Would this give us any more zip???? See sketch. I have never tried it. You would need some sort of a tapered reamer to cut the vent right.

As I told you on the phone, I can, in my spare time (between shoe customers) load 150 to 200 boosters in a week. This is not bad--and I like to do it. But if I had to make several thousand, I would need a factory--or the help of a factory. What I would like to do would be to turn the whole thing over to some one. We have checked every way we know how, and the power units are still fireworks. We could get by sending them to people like you, and to bonafide rocket people. But to ship them to Jim Smith in Omaha would land us in jail. At least that is what my lawyer tells me, and that is what my fireworks making friend tells me. If you can come up with the answer that would let us ship all over--no questions asked--we would be in business!!

If the thing has value as a training aid--or to professional rocket people for powering experimental models--then we are getting some where. I could get set up to take care of one person like you with out much strain, but to make thousands of them will take a regular factory.

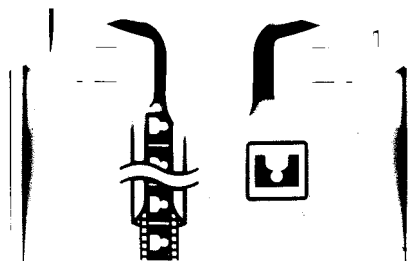
If any one you come in contact with is interested in the thing, do what you can to sell them. If I can be of help, let me know and I'll go see them, or contact them in some way.

I want to get this out air-mail so you will have it by Sat. If anything important comes up, call me--collect. I will ship the boosters to you in a few days.

Thanks again for the good letter--the spinning is good--but does it foul up the chute??? More later.

Best regards , Orville Carlisle

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*This is Complete Booster.*

*This is 1/2 in wide Cardboard Sleeve.*



*This is SOLID BOOSTER NO DELAY.*

The sleeve is cemented tight to the complete booster (booster, delay, and expelling charge)

The complete booster is inserted tight in the rocket body.

A piece of Jetex fuse, doubled, is inserted in vent of the complete booster.

The open end of the solid booster slips into sleeve, snug, but not tight. I put a strip of scotch tape around it so it was smooth--and snug.

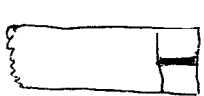
I also put a small charge of powder in the open end of the solid booster before I slipped it into the sleeve. Same size charge as expels the chute.

When fired it went WOOOOOSH-----whoosh., and away she went.

The first stage burned out I would guess about 20 to 30 feet up. The rocket kept going straight and then whoosh the second stage took over. You could hardly tell there was a delay while the second took hold. The Jetex fuse is fast when enclosed in the vent. The light expelling charge kicked the burned out case out of the sleeve slick as a whistle.

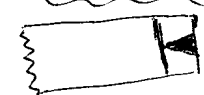
Before launching I put 4 round lead sinkers about 1/4 inch in diameter on the nose with tape to make her nose heavy. Just taped them on the outside. Looked like the diskens, but worked ok.

I sort of bent the jetex fuse into a wad where it extended from the vent. I think it would fire the 2nd stage with just the light charge that kicks out the burned out first stage. Have not tried it yet. But I will.



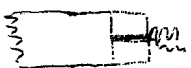
*Vent Straight*

*This is the way I do it now*



*Vent "V" shaped*

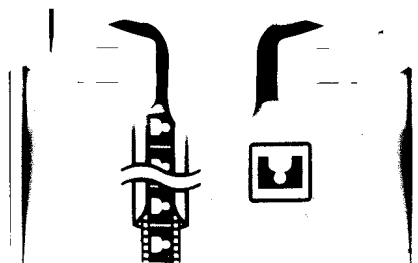
*would V shape give more thrust?*



*Jetex Sort of "wadded" up on 2nd stage.*

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*Car*



If you have need for smaller ~~expelling~~ end cups, just take a dowel rod the size you want, and sort of press and mould the cups you have around the rod. You can make them smaller with out any trouble.

Also the reasons for the little holes in the plastic chute are to get the air out of the folds when you fold it up.

Just be sure everything is inside the wrapper except the nose cord and the shock cord. See crude drawing.

You can make the chute smaller. Smaller is ok, but I could get 4 chutes out of one yard of the plastic, so we went to this size--18 in square.

