

Dolmar, a lesser known German chain saw manufacturer offers little in the field of safety equipment. This design will stablsh their safety products while focusing their marketing to a specific user.



dolmar

User:

name: Doug Steiner

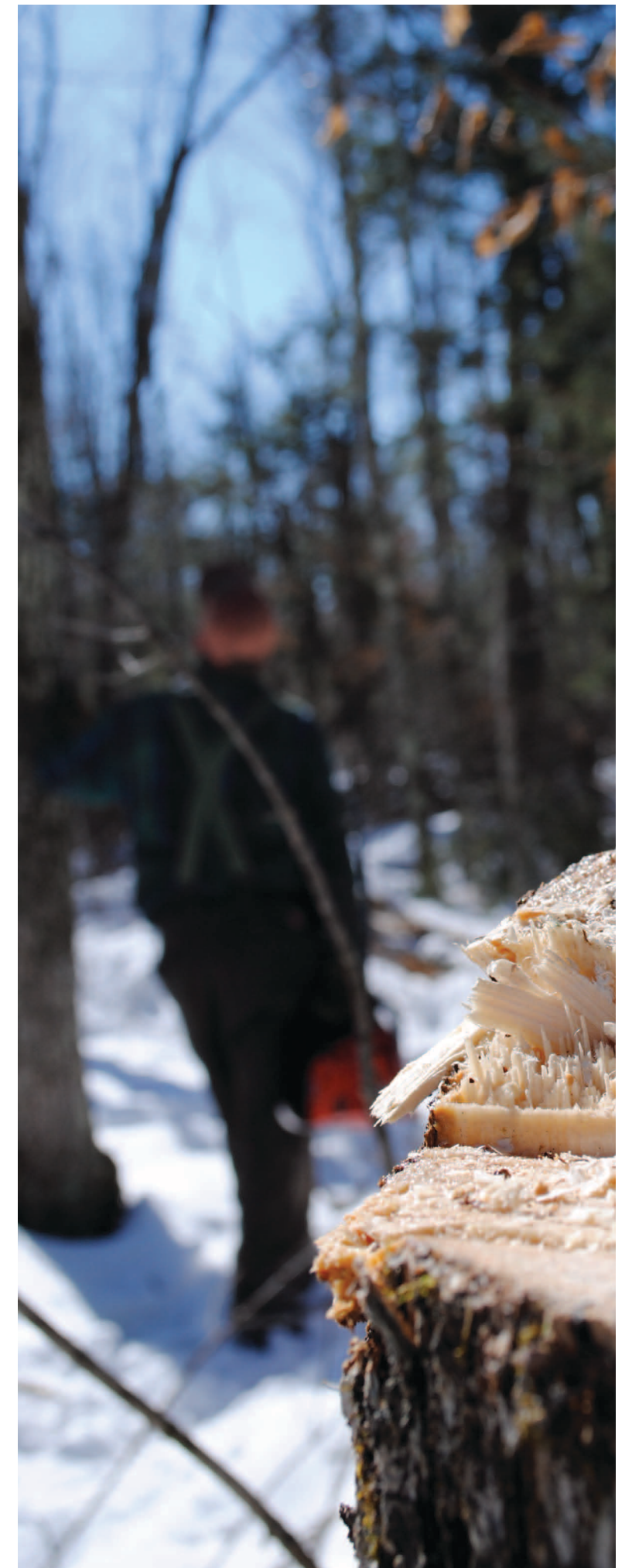
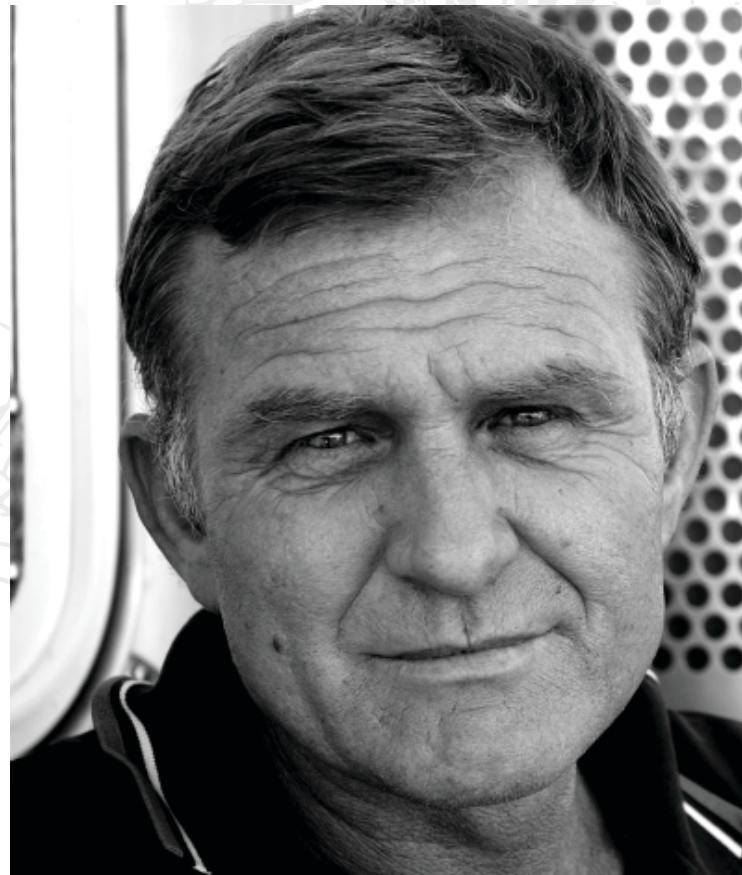
age: 49

hometown: Rhineland, WI

occupation: Fire Chief

brands: Carhartt, Dolmar, Sorel, Ford, Polaris

logging experience: Doug inherited four-hundred acres of land that his great-grandfather purchased in the 1950s. Doug and his family harvest wood from his forest lots in the winter to supplement his income. Though it is more of a hobby than a profession, Doug takes logging very seriously. He has both knowledge and equipment that is just as good as the pros'.



Observational Research:

To conduct research for this project, I contacted Mike Wicke, a man in his early 50s who independently logs his own land with the help of his son and one of his son’s friends.

Mike invited me out to observe their operation. Not only was I able to gain a better understanding of the logging process, but I was even able to experience some of it firsthand.

1

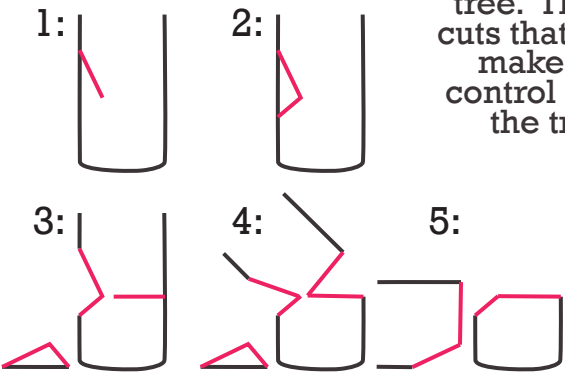
A safe, nicely sized tree is selected.

Factors that influence the selection the tree include it's proximity to other trees, its liveliness, and size.

The “feller” must consider which direction they want the tree to fall.

2

Next, the logger begins cutting the tree. The series of cuts that the logger makes gives him control over where the tree will fall.



Selecting and sizing up the tree:



Cutting down or “felling” the tree:



3

“Limbing” and marking the tree:

Limbs are cut off of the tree to make it easier to drag out of the woods.

Next, the tree is marked by a chain saw into 100 inch sections. This helps to determine how many sections of the tree can be used.



4

Chaining and hauling:

The trees are fastened to a tractor with a chain.

They are then drug to whatever location they will be stacked.



5

“Bucking” and and stacking:

The trees are now cut into the hundred inch sections. This is the size that the paper mill demands.

The trees are then stacked, where they will wait to be hauled away by a truck.



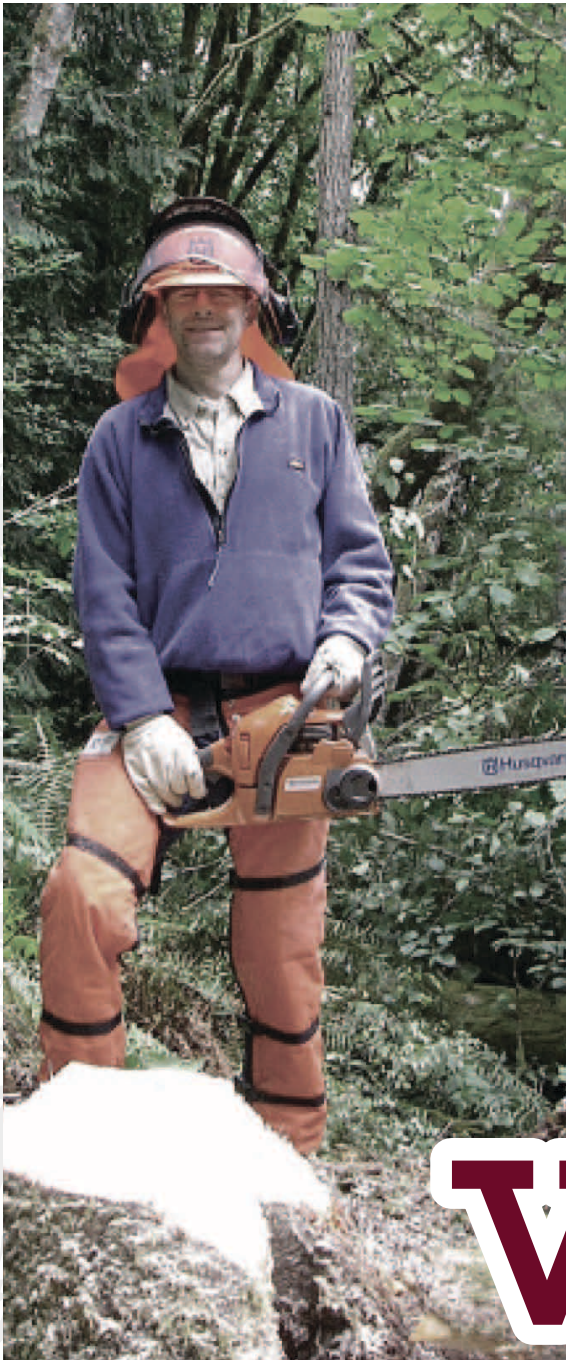
Helmet it's poorly ventilated and bulky.

Little arm protection

Generic working gloves

Big, bulky chaps

Steel-toed boots



existing proper chain saw safety equipment:

Through my research, I discovered the actual felling of the tree is the most dangerous part of the process, due to the dangerous nature of using a chain saw and because of the possibility of a tree to injure a person while falling.

VS.

the loggers I observed:



No head, eye or ear protection

Little cover on arms

Heavy gloves with low dexterity

No chaps

Big clunky boots

“The chaps are too hot and bulky...”

“I cant hear other people when I have ear plugs in, which is dangerous.”

“The helmets are awkward and hot.”

“I should be using a wedge, but it’s all the way over there in the truck.

Andy! Joe! Come give me a hand!”



not using a wedge: unsafe logging practices

Accident Location and Frequency as Related to Chain Saw Use: (U.S. Product Safety Commission)

Head Injuries: 3418

Upper Body: 2141

Arm and Hand: 17,994

Leg: 16,348

Foot: 2885

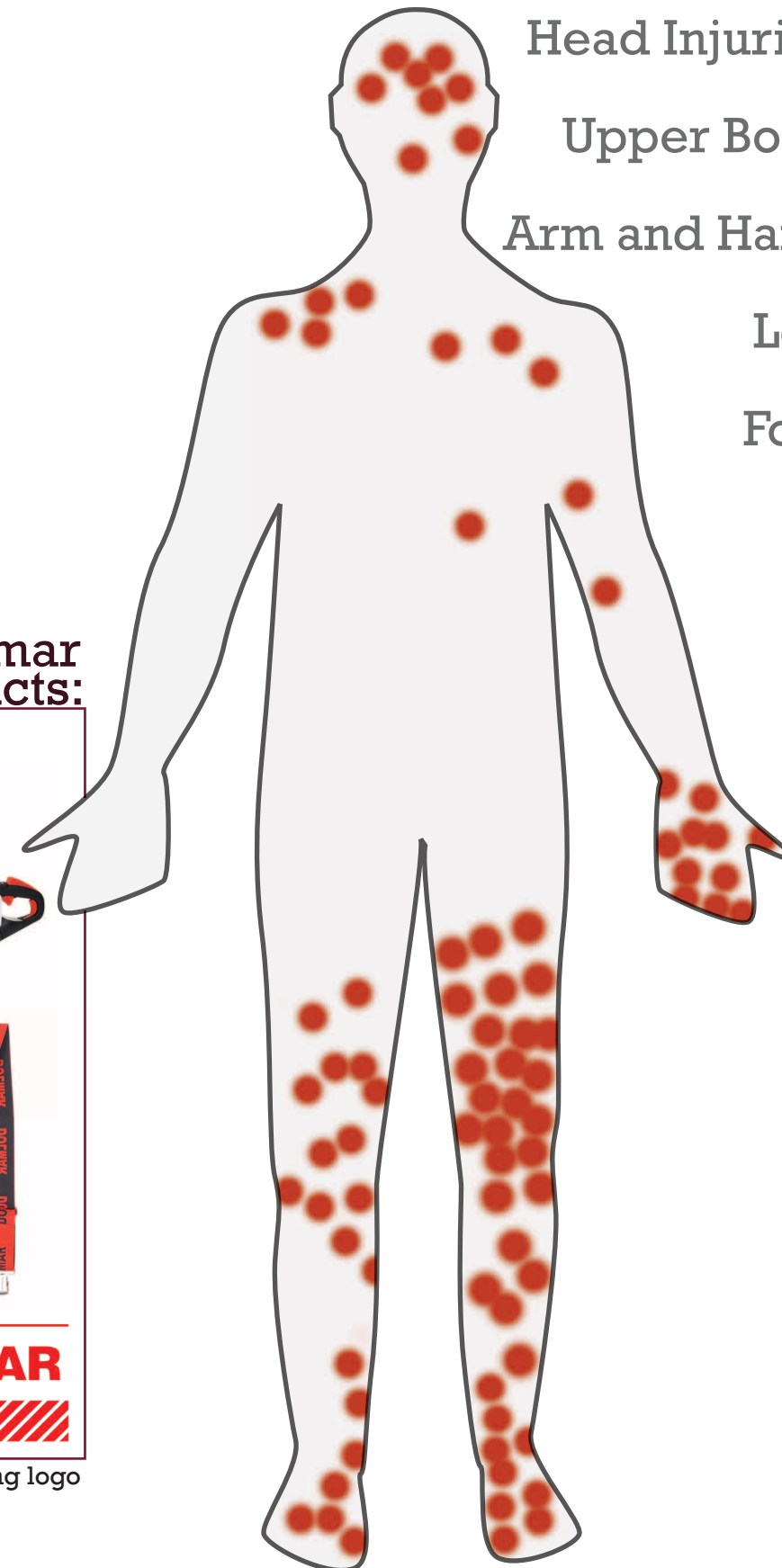
safety equipment:



Dolmar products:

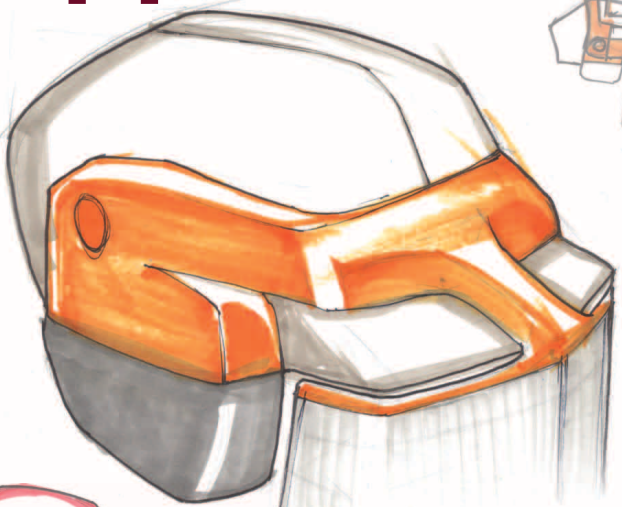
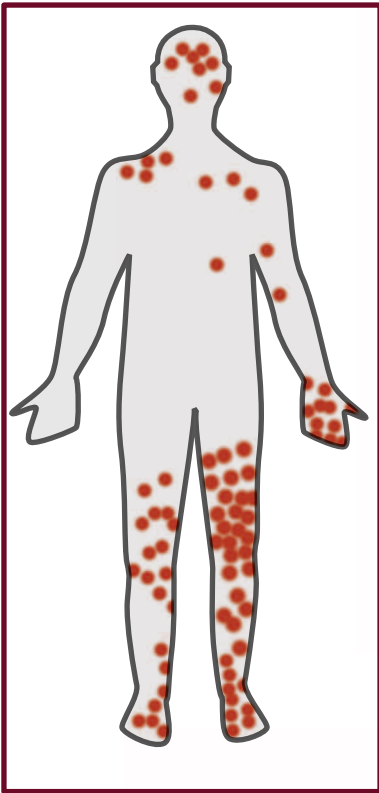


Dolmar's existing safety gear is produced by outside companies and is made "Dolmar" by slapping a logo on it. This creates a line of products with a very inconsistent design language.

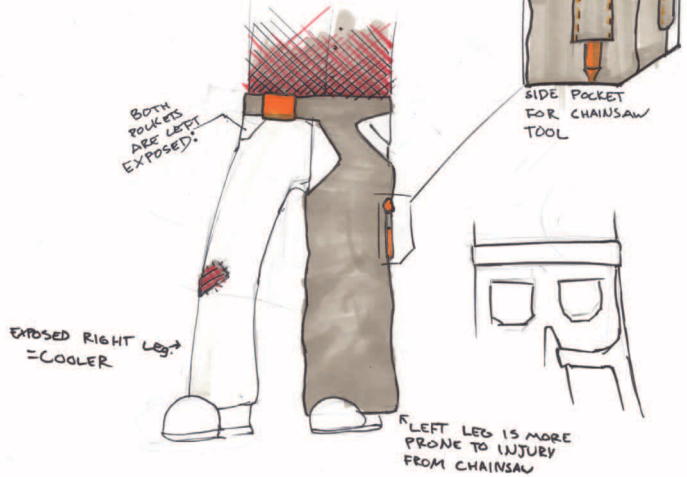
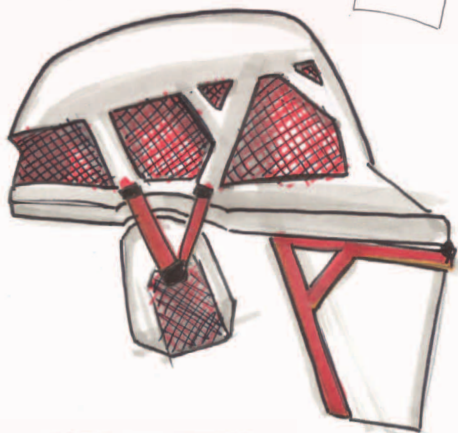
**DOLMAR**

existing logo

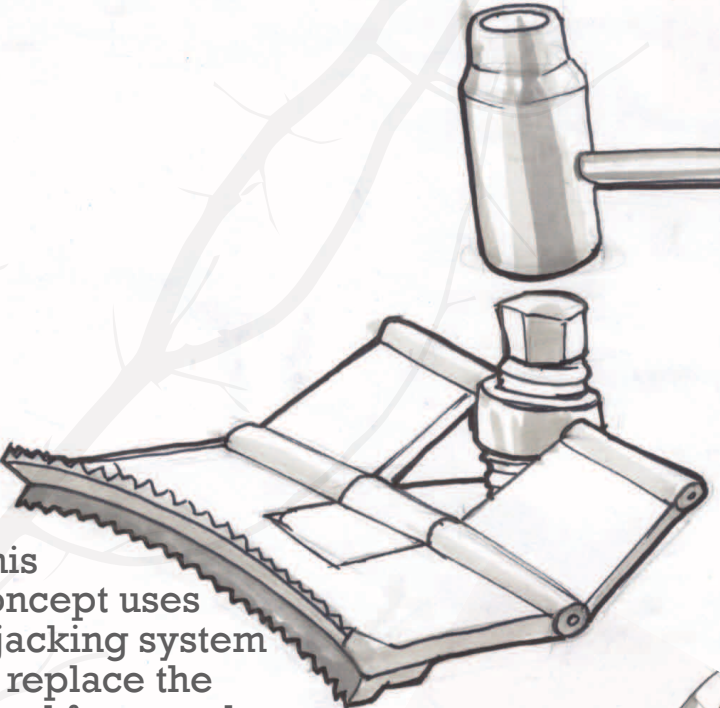
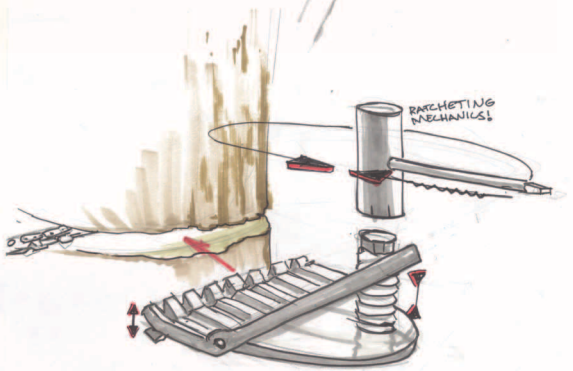
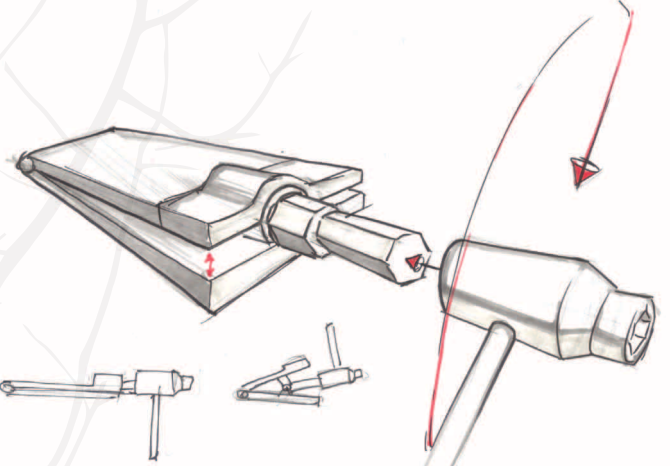
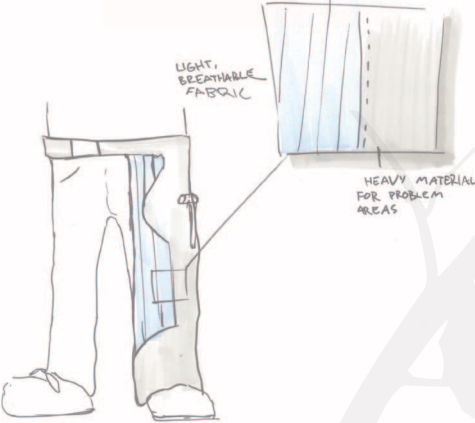
personal safety equipment



These helmet concepts focus on efficient function in terms of eye, head, and hearing protection. Some also consider ventilation.

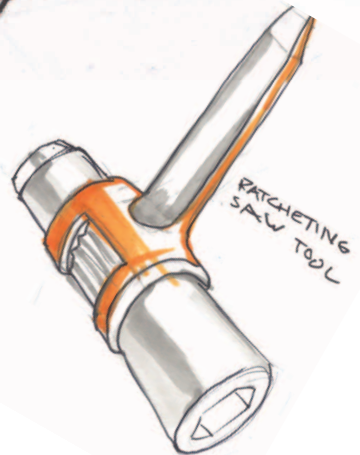


one-legged chaps focus protecting problem areas.



This concept uses a jacking system to replace the need for a wedge, which requires a mallet to use.

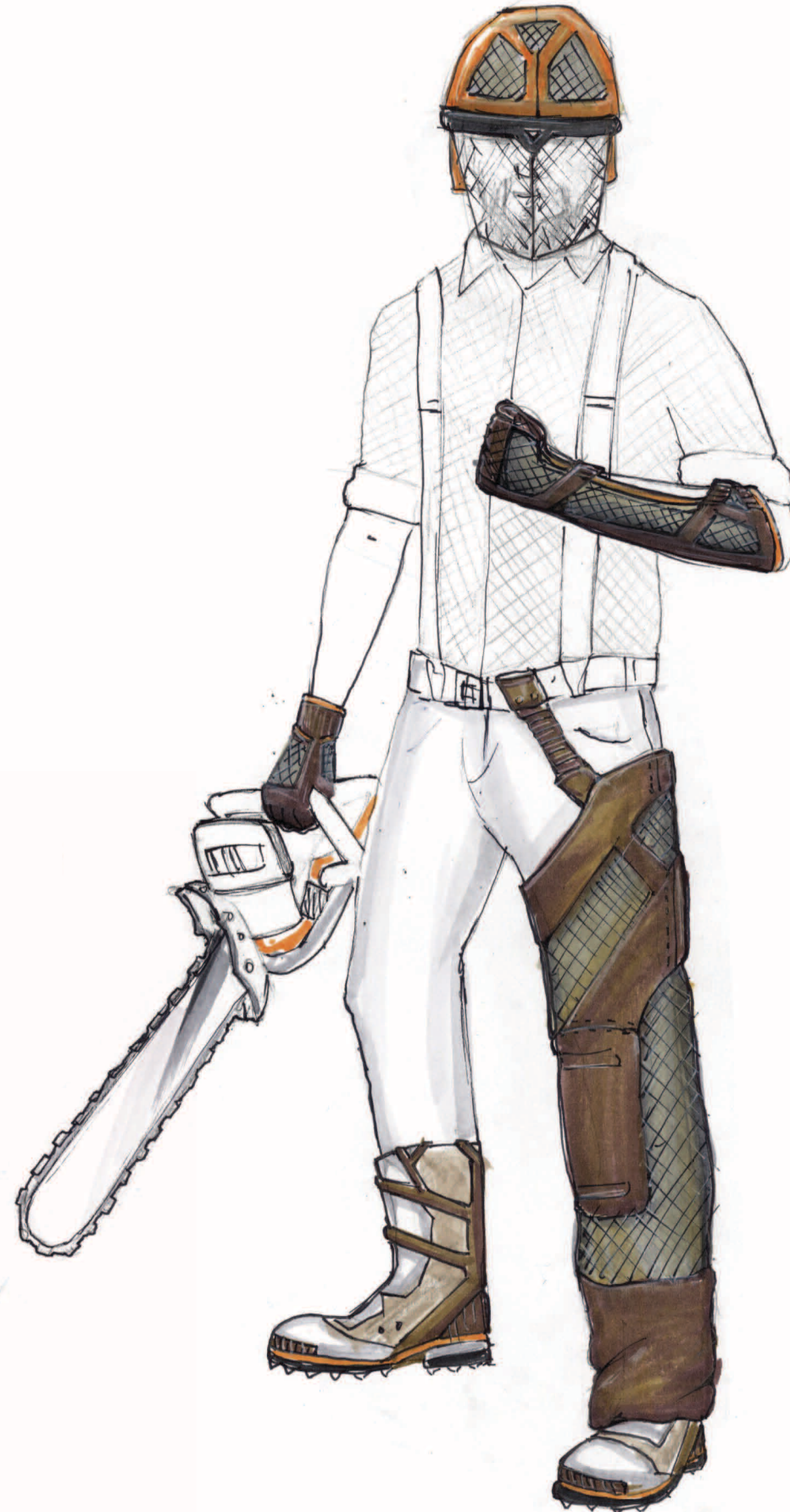
This tool would be more compact and could implement the chain saw wrench, which comes standard with every chain saw.



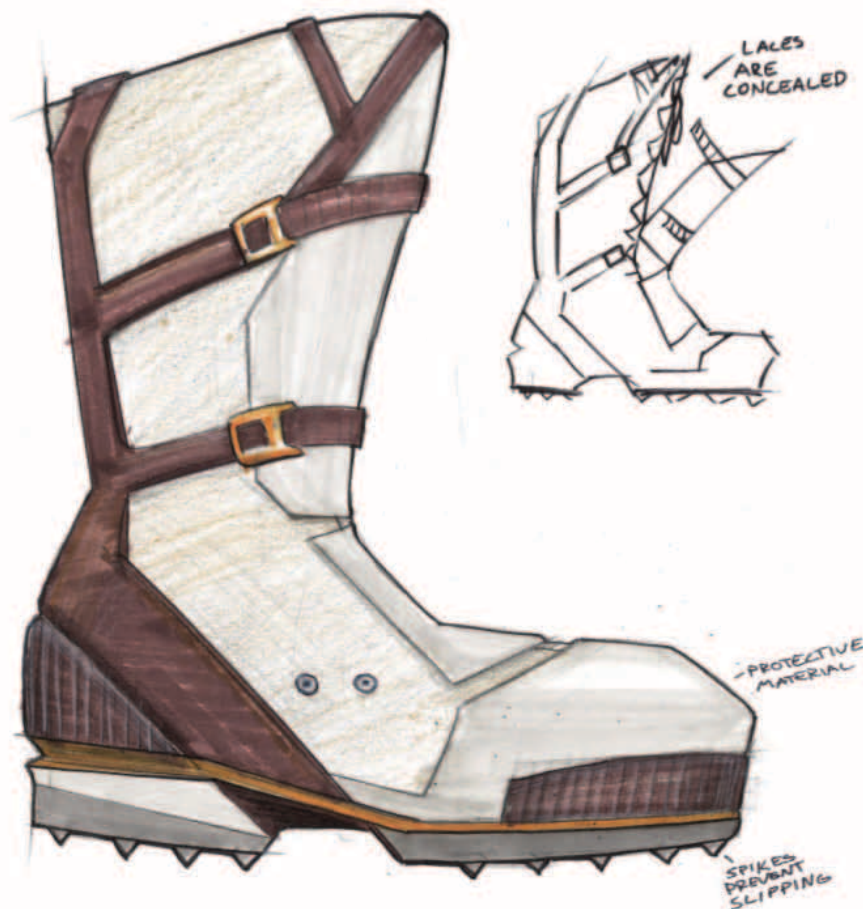
anti-wedge jacking systems

Refinement:

The Woodsman :
Takes inspiration from brands such as:

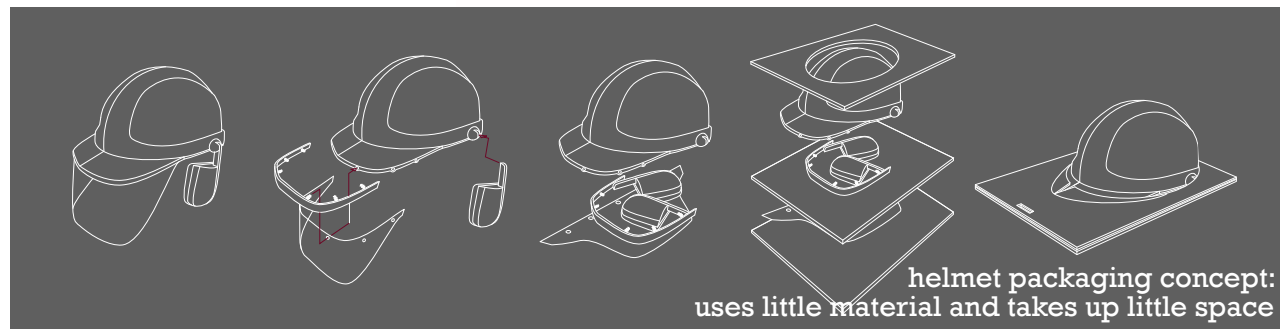


The B.A.M.F. (Big And Manly Forester) :
Takes inspiration from brands such as:



The Sportsman :
Takes inspiration from brands such as:





visor and earmuffs move in sync
gaps in helmet allow for air flow
Screen face mask doesn't scratch

arm padding protects arm
from rouge chains as well
as brush and branches
anti-vibration padding

extra padding in problem areas
storage for wedge
chain saw wrench
hammer loop
knee padding
kevlar mesh offers
ventilation
ankle guard
picks up where
steel toes end

new logo to work
with new design
language

this safety gear cuts
down on bulk by
focusing protection
on where 90% of
chain saw injuries
occur.

dolmar

