

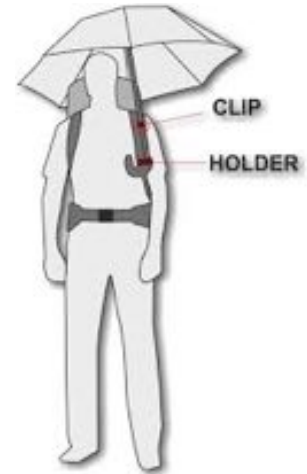
Umbrella Holder

Hands Free

Overview

A hands-free umbrella holder that will allow people to carry a bookbag and hold an umbrella without using hands.

By using clips and other materials, it will attach onto a backpack strap and will provide an affordable, stable holder for an umbrella.



According to IES...

- Roughly 17.4 million students attend a college or university
- Its an increase of 48 percent from 1990
 - enrollment was 12.0 million students
- Going to increase in the future... so in the long run more money

Number of U.S. Colleges and Universities	Number	Enrollment
Public 4-year institutions	629	6,837,605
Private 4-year institutions	1,845	4,161,815
Public 2-year institutions	1,070	6,184,229
Private 2-year institutions	596	303,826
Total	4,140	17,487,475



Potential Buyers.....

Competition

Parasols & Rain Umbrellas

Sort: Default View: Grid My Shortlist (0)

Merchant links are sponsored



Freedom Hands Free
Rain/Sun/Snow
Umbrella-Parasol Holder
\$19.95 from 2 stores



Helpful Aids for Living
Hands Free Umbrella Holder Bag
\$19.95 from 4 stores



Umbrella Hat Multicolor
Hands Free Umbrellas Golf
\$4.48 from eBay -
1000greatdeals



New Multicolor Hands Free
Rain & Sun Fun Umbrella
Hats
\$3.99 from Super-GoodDeals
Discount Variety Store



wandSCHIRM Telescope
Hands Free Umbrella - Black
\$71.50 from Campzoo



10 Pk Umbrella Hat Hands
Free Head Strap Sun Rain
Red White Blue
\$24.99 from eBay



Swing Handfree Umbrella
Silver V2H05S17-SILVER
\$64.00 from Mountain Trail
Outfitters



Business Sportsmaster
Oversize Golf Umbrella |
Custom Golf Accessories
\$15.52 from Quality Legs-
Products



(10) Umbrella Hat Multi Color
Hands Blocks Free
Umbrellas Golf Fishing
\$35.98 from eBay -
1000greatdeals



Fishing Golf Beach Hands
Free Umbrella Hat, Red
\$6.99 from Rakuten.com -
Flashing LED Boards



wandSCHIRM Swing
Handfree Umbrella - Black
\$61.50 from Campzoo



Special Deal Buy 3 Get one
FREE - Beautiful handmade
and hand
\$59.00 from Etsy -
holycroproducts



EuroSchirm Swing Handfree
Umbrella
\$13.00 from Campzoo



Umbrella Hat MultiColor
Hands Free Umbrellas Golf
Shade
\$11.00 from Bonanza -
bluevagnon14's booth



Nike 62" Windproof Single
Canopy Umbrellas Black
\$29.95 from 3 stores
More style options



Thumbprintz Umbrella
Frenzy
\$19.33 from Walmart



Come 43 20m Length Hands
Free Outdoor Sports Fishing
Rain Sun
\$21.71 from Fishpond.com



totas ISOTONER Superdome
Collapsible Vented Canopy
Umbrella
\$22.95 from BallOutlet.Com



Ultimate weather umbrella

Rain Umbrellas - Automatic

The Ultimate Weather Umbrella is designed for the 21st century. The Ultimate Weather Umbrella exploits the fundamental limitations of today's traditional umbrella while ...

See more details at sportsimpofahd.com x

\$59.95

+\$13.43 shipping. No tax
sportsimpofahd.com
1 seller review

Shop

Save to Shortlist

These are all over-priced and serve no practical use as they do not protect you from the rain very well.

Materials and Design Process

- 1) 1 Umbrella
- 2) 3D Printing
- 3) 2 Clips



As part of the design process, we and got the ideas rolling. Then we designed it and sketched it out on paper to get a rough idea on how it would work. Then designed it on SolidWorks, and printed it out via a 3D printer.

Prototype- Process

1. Created Prototype using Velcro straps
2. Extended Base, added straps, added umbrella grips
3. Smoothed out edges
4. Added Collectable Color Variations



Prototypes



1st Prototype



2nd Prototype



3rd & Final Design

Conclusion

- Hands-Free
- Portable and Affordable

