



US00D921559S

(12) **United States Design Patent**
Ring et al.

(10) **Patent No.:** **US D921,559 S**
(45) **Date of Patent:** **** Jun. 8, 2021**

(54) **AUTOMOBILE HOOD HINGE**
(71) Applicant: **Ringbrothers LLC**, Spring Green, WI (US)
(72) Inventors: **James Alan Ring**, Spring Green, WI (US); **Michael Daniel Ring**, Plain, WI (US); **Matthew Edward Moseman**, Sauk City, WI (US)

8,201,306 B2 * 6/2012 Kim E05F 1/1215
16/360
8,484,804 B2 * 7/2013 Mehta B60R 21/38
16/370
D717,634 S 11/2014 Lu
D726,637 S * 4/2015 Ring D12/400
9,308,885 B2 * 4/2016 Schabenbergers B60R 21/38
D758,164 S 6/2016 Lu
9,366,066 B2 * 6/2016 Hwang E05D 11/00
(Continued)

(73) Assignee: **Ringbrothers LLC**, Spring Green, WI (US)

(**) Term: **15 Years**

(21) Appl. No.: **29/682,895**

(22) Filed: **Mar. 8, 2019**

(51) **LOC (13) Cl.** **12-16**

(52) **U.S. Cl.**
USPC **D12/223**

(58) **Field of Classification Search**
USPC D12/106, 114, 164, 169, 170, 172, 196,
D12/223, 400, 406, 412; D8/323
CPC B60R 21/38; E05D 3/145; E05C 17/00
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D223,595 S	5/1972	Persinger	
3,815,176 A	6/1974	Porter	
4,012,807 A *	3/1977	Kern	E05D 3/16 16/288
D335,622 S	5/1993	Millsap	
D336,841 S	6/1993	Wilson	
D367,808 S	3/1996	Blomqvist	
5,557,829 A	9/1996	Schoen	
7,506,716 B1	3/2009	Salmon	
7,596,833 B2 *	10/2009	Erwin	B60R 21/38 16/370
7,802,345 B2 *	9/2010	Mathew	E05D 15/46 16/370

OTHER PUBLICATIONS

Hood Hinge, www.ringbrothers.com [online]. Published on or before Oct. 18, 2020, [retrieved on Oct. 18, 2020]. Retrieved from the Internet: <URL:https://www.ringbrothers.com/1973-1977-cutlass-hood-hinge-kit-air-frame-fiberglass-black> (Year: 2020).*
(Continued)

Primary Examiner — Christian P. McLean
Assistant Examiner — Adam C Mager
(74) *Attorney, Agent, or Firm* — Fitch, Even, Tabin & Flannery LLP

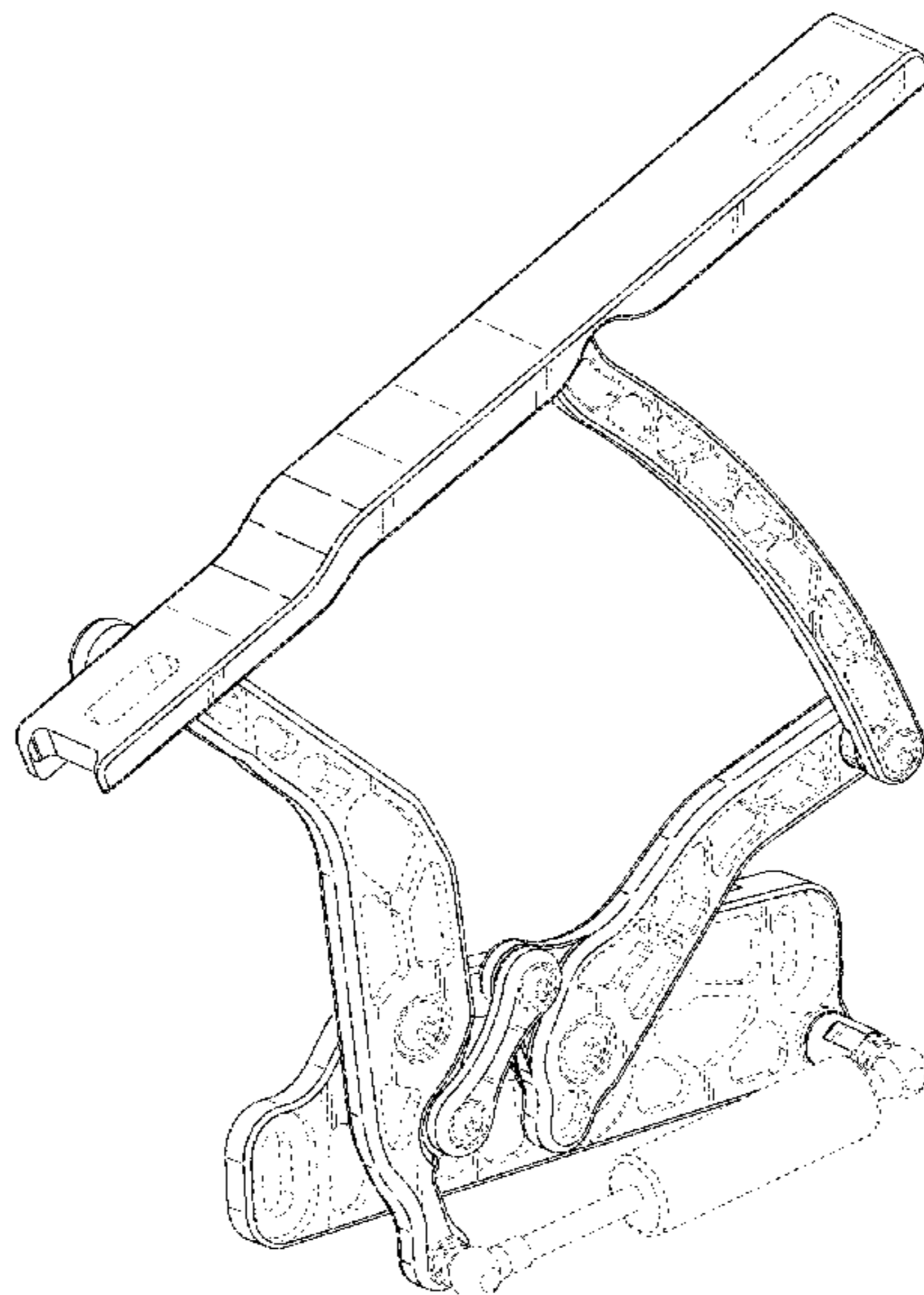
(57) **CLAIM**

The ornamental design for an automobile hood hinge, as shown and described.

DESCRIPTION

FIG. 1 is a top, right perspective view of an automobile hood hinge showing our new ornamental design;
FIG. 2 is a top plan view thereof;
FIG. 3 is a right side elevation view thereof;
FIG. 4 is a front elevation view thereof;
FIG. 5 is a rear elevation view thereof;
FIG. 6 is a left side elevation view thereof; and,
FIG. 7 is a bottom plan view thereof.
The broken lines depict unclaimed subject matter and form no part of the claimed design.

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D765,488	S	9/2016	Held	
9,481,340	B2 *	11/2016	Kim	B60R 21/38
9,701,275	B2 *	7/2017	Kim	B60R 21/34
9,701,277	B2 *	7/2017	McIntyre	B60R 21/38
9,783,154	B2 *	10/2017	Kim	E05D 5/0207
D804,276	S	12/2017	Lu	
10,100,565	B2 *	10/2018	Waskie	E05D 15/48
D834,916	S	12/2018	Lu	
10,239,484	B2 *	3/2019	Hwang	B62D 25/12
D853,828	S	7/2019	Lucas	
10,336,291	B2 *	7/2019	Schabenberger	B62D 25/12
10,384,638	B2 *	8/2019	Leschnik	E05D 7/04
10,703,326	B2 *	7/2020	Gabler	E05D 3/145
10,752,201	B2 *	8/2020	Fredriksson	B60R 21/38
2003/0056330	A1	3/2003	Westerdale	
2003/0217436	A1	11/2003	Hashim	
2004/0205934	A1	10/2004	Derbis	
2007/0151791	A1	7/2007	Gust	
2008/0034552	A1	2/2008	Nguyen	
2009/0188081	A1	7/2009	Mathew	
2010/0024162	A1 *	2/2010	Walz	B60R 21/38 16/233
2016/0144822	A1	5/2016	Kim	
2016/0245003	A1	8/2016	McIntyre et al.	
2016/0258196	A1	9/2016	Yamamoto	
2017/0113648	A1	4/2017	Kim	
2017/0259776	A1	9/2017	McLundie	
2017/0335610	A1	11/2017	Hall	
2017/0369028	A1	12/2017	Patterson	
2019/0168705	A1	6/2019	Springsklee	
2019/0299921	A1 *	10/2019	Maeda	B60R 21/0134
2020/0056410	A1 *	2/2020	French	E05D 3/06
2020/0108793	A1	4/2020	Kim	
2020/0141164	A1 *	5/2020	Kim	G01S 13/931
2020/0157859	A1	5/2020	Szente	
2020/0164831	A1	5/2020	Wood	
2020/0165851	A1 *	5/2020	Page	E05D 11/1007

OTHER PUBLICATIONS

Screen captures of a Wayback Machine Internet Archive showing images of a '1955-1956 Tri Five Air Billet Hood Hinge Kit—Solid Frame' and a '1955-1956 Tri-Five Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 24, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/tri-five.html?cat=347>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1957 Tri Five Air Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016 at the following URL: <https://ringbrothers.com/1957-tri-five-air-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1957 Tri Five Air Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <http://ringbrothers.com/1957-tri-five-air-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1963□1964 Impala Billet Hood Hinge Kit □ Solid Frame' and '1963□1964 Impala Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/impala.html?dir=desc&order=position>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1963□1965 Nova Billet Hood Hinge Kit—Solid Frame' and '1963□1965 Biva Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/>

[chevrolet/nova.html?cat=343](http://ringbrothers.com/hinges/hood-hinges/chevrolet/nova.html?cat=343); enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1964 Chevelle/El Camino Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Mar. 8, 2016 at the following URL: <https://ringbrothers.com/1964-chevelle-el-camino-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1964 Chevelle/El Camino Billet Hood Hinge Kit—Solid Frame' published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/1964-chevelle-el-camino-billet-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1964-1967 Oldsmobile Cutlass Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Mar. 24, 2017 at the following URL: <http://ringbrothers.com:80/1964-1967-oldsmobile-cutlass-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1964-1967 Oldsmobile Cutlass Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Mar. 24, 2017 at the following URL: <http://ringbrothers.com:80/1964-1967-oldsmobile-cutlass-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1965-1966 Ford Mustang Billet Hood Hinge Kit—Solid Frame' and a '1965-1966 Ford Mustang Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/ford.html?cat=350>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1965-1967 Chevelle/El Camino Billet Hood Hinge Kit—Solid Frame' and a '1965-1967 Chevelle/El Camino Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/chevelle-el-camino/1965-1967-chevelle-el-camino.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1965-1967 Impala Billet Hood Hinge Kit—Solid Frame' and a '1965-1967 Impala Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/impala.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1966-1967 GTO, Lemans, Tempest Billet Hood Hinge Kit—Solid Frame' and a '1966-1967 GTO, Lemans, Tempest Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Jan. 3, 2017 at the following URL: <http://ringbrothers.com:80/hinges/hood-hinges/pontiac/gto-lemans-tempest/1966-1967-gto-lemans-tempest.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen capture of a Wayback Machine Internet Archive showing images of a '1966-1967 Nova Billet Hood Hinge Kit—Air Frame (For Aftermarket Front Clips)' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <https://ringbrothers.com/1966-1967-nova-billet-hood-hinge-kit-air-frame-for-aftermarket-front-clips.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1966-1967 Nova Billet Hood Hinge Kit—Solid Frame' and a '1966-1967 Nova Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/>

(56)

References Cited

OTHER PUBLICATIONS

chevrolet/nova.html?cat=344; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1966-1967 Nova Billet Hood Hinge Kit—Solid Frame (For Aftermarket Front Clips)' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <https://ringbrothers.com/1966-1967-nova-billet-hood-hinge-kit-solid-frame-for-aftermarket-front-clips.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1966-1970 B-Body Billet Hood Hinge Kit—Solid Frame' and a '1966-1970 B-Body Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Mar. 7, 2017 at the following URL: <http://ringbrothers.com:80/hinges/hood-hinges/mopar.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1968 Mustang Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 5, 2017 at the following URL: <https://ringbrothers.com/1967-1968-mustang-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1968 Mustang Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <https://ringbrothers.com/1967-1968-mustang-billet-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1969 Camaro Billet Hood Hinge Kit—Solid Frame' and a '1967-1969 Camaro Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/camaro/1967-1969-camaro.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1969 Firebird Billet Hood Hinge Kit—Solid Frame' and a '1967-1969 Firebird Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/pontiac/firebird/1967-1969-firebird.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1970 Cougar Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 21, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/mercury.html?dir=desc&order=position>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1967-1969 Cougar Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Jul. 11, 2016 at the following URL: <http://ringbrothers.com:80/1976-1970-cougar-billet-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a 'Chevy/GMC Truck Billet Hood Hinge Kit—Solid Frame' and a 'Chevy/GMC Truck Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/chevy-gmc-truck.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1968-1969 Chevelle/El Camino Billet Hood Hinge Kit—Solid Frame' and a '1968-1969 Chevelle/El Camino Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/chevelle-el-camino/1968-1969-chevelle-el-camino.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1968-1972 GTO, Lemans, Tempest Billet Hood Hinge Kit—Air Frame' and a '1968-1972 GTO, Lemans, Tempest Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Jan. 3, 2017 at the following URL: <http://ringbrothers.com:80/hinges/hood-hinges/pontiac/gto-lemans-tempest/1968-1972-gto-lemans-tempest.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1968-1974 Nova Billet Hood Hinge Kit—Solid Frame' and a '1968-1974 Nova Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/nova.html?cat=345>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1968-1974 Ventura Billet Hood Hinge Kit—Solid Frame' and a '1968-1974 Ventura Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Jan. 3, 2017 at the following URL: <http://ringbrothers.com:80/hinges/hood-hinges/pontiac/ventura.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1969-1970 Mustang Billet Hood Hinge Kit—Solid Frame' and a '1969-1970 Mustang Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Jan. 3, 2017 at the following URL: <http://ringbrothers.com:80/hinges/hood-hinges/ford/1969-1970-mustang.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970 Impala Billet Hood Hinge Kit—Solid Frame' and a '1970 Impala Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 13, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/impala.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1972 Chevelle/El Camino Billet Hood Hinge Kit—Solid Frame' and a '1970-1972 Chevelle/El Camino Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 14, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/chevelle-el-camino.html?cat=335>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1972 Monte Carlo Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 24, 2016 at the following URL: <http://ringbrothers.com/hinges/hood-hinges/chevrolet/monte-carlo.html?dir=desc&order=position>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1974 E-Body Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 1, 2017 at the following URL: <https://ringbrothers.com/1970-1974-e-body-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1974 E-Body Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Sep. 2, 2016, at the following URL: <http://ringbrothers.com/80/1970-1974-e-body-billet-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1981 Camaro Billet Hood Hinge Kit—Solid Frame' and a '1970-1981 Camaro Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016, at the following URL: <https://ringbrothers.com/hinges/hood-hinges/chevrolet/camaro.html?cat=330>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1981 Camaro Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 15, 2016, at the following URL: <https://ringbrothers.com/hinges/hood-hinges/chevrolet/camaro.html?cat=330>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

(56)

References Cited

OTHER PUBLICATIONS

Screen captures of a Wayback Machine Internet Archive showing images of a '1970-1981 Firebird Billet Hood Hinge Kit—Air Frame' and a '1970-1981 Firebird Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Jan. 14, 2016, at the following URL: <https://ringbrothers.com/hinges.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a 'HQ-WB Holden Monaro and LH-UC Torana Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 14, 2016, at the following URL: <https://ringbrothers.com/1968-1971-holden-monaro-billet-hood-hinge-kit-air-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a 'HQ-WB Holden Monaro and LH-UC Torana Billet Hood Hinge Kit—Solid Frame' as published and offered for sale at least as early as Apr. 14, 2016, at the following URL: <http://ringbrothers.com/1968-1971-holden-monaro-billet-hood-hinge-kit-solid-frame.html>; enlarged image of the hinge kit as published at the referenced URL address (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a 'Ford Falcon Billet Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Apr. 14, 2016, at

the following URL: <http://ringbrothers.com/hinges/hood-hinges/ford-australia.html?dir=desc&order=position>; enlarged image of the hinge kits as published at the referenced URL address (2 pages).

PageVault Screen captures of a Wayback Machine Internet Archive showing images of a '1982-1992 Firebird Billet Hood Hinge Kit—Air Frame' as published at the following URL: <https://web.archive.org/web/20190324155203/https://ringbrothers.com/hinges/hood-hinges/pontiac/firebird/1982-1992-firebird.html> believed to be publicly available at least as early as May 10, 2018 (2 pages).

PageVault Screen captures of a Wayback Machine Internet Archive showing images of a '1982-1992 Camaro Billet Hood Hinge Kit—Air Frame' as published at the following URL: <https://web.archive.org/web/20190324143949/https://ringbrothers.com/hinges/hood-hinges/chevrolet/camaro/1982-1992.html> believed to be publicly available at least as early as May 10, 2018 (2 pages).

Screen captures of a Wayback Machine Internet Archive showing images of a '1973-1980 Chevy/GMC Truck Hood Hinge Kit—Solid Frame' and a '1973-1980 Chevy/GMC Hood Hinge Kit—Air Frame' as published and offered for sale at least as early as Aug. 1, 2018, at the following URL: <https://ringbrothers.com/hinges/hood-hinges/chevrolet/chevy-gmc-truck/1973-1980-chevy-gmc-truck.html>; enlarged images of the hinge kits as published at the referenced URL address (2 pages).

Non-Final Office Action issued in related U.S. Appl. No. 29/648,429, dated Jan. 22, 2021, 13 pages.

* cited by examiner

FIG. 1

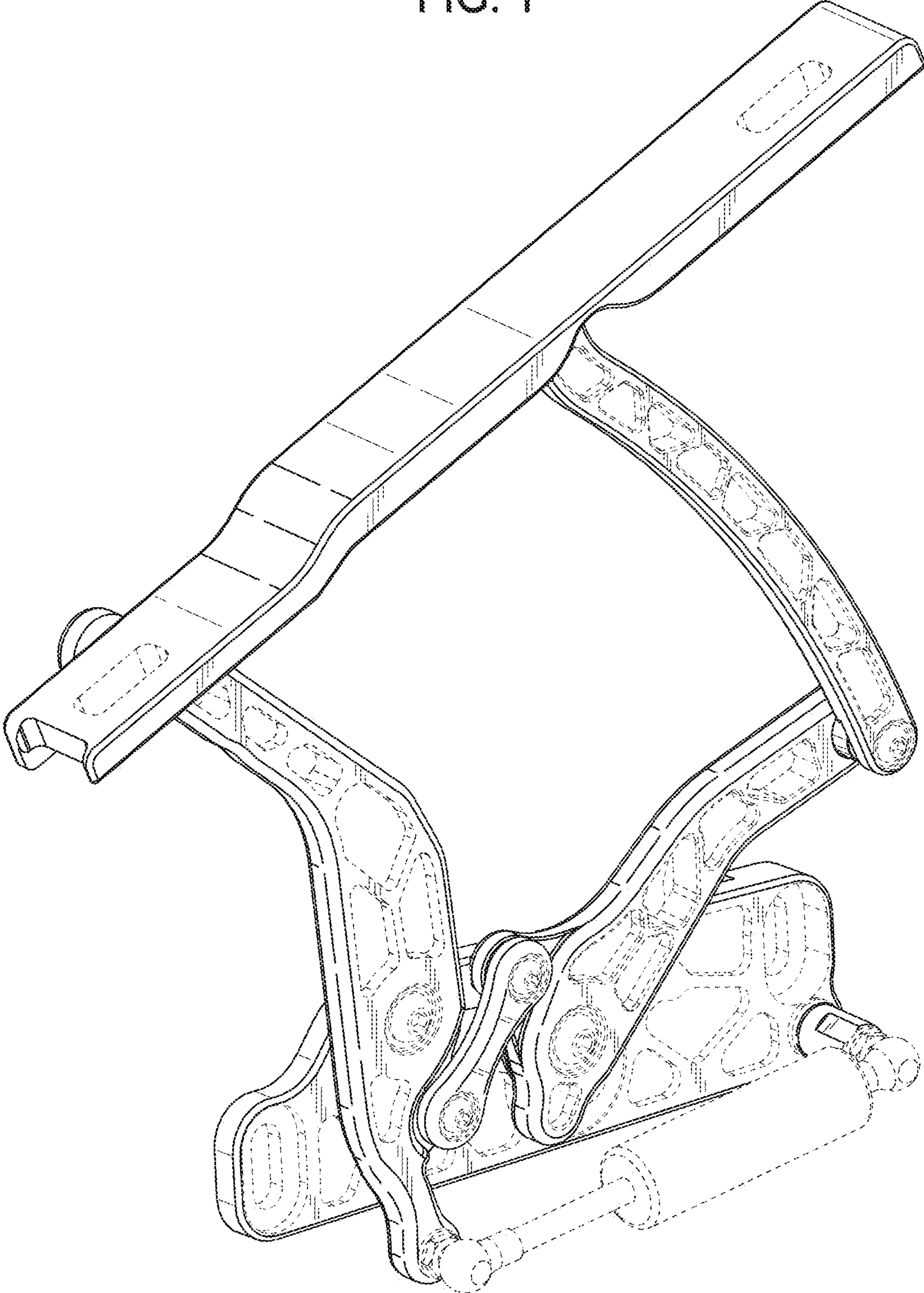


FIG. 2

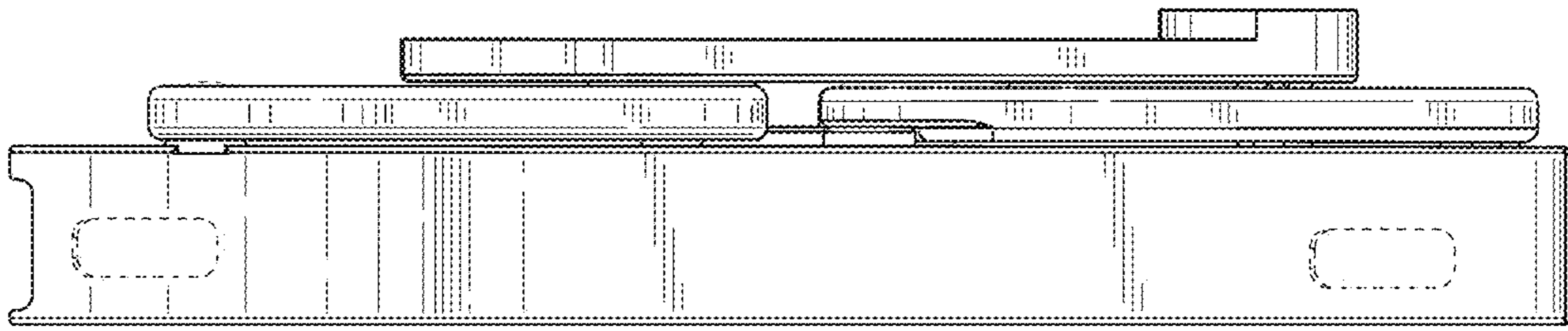


FIG. 3

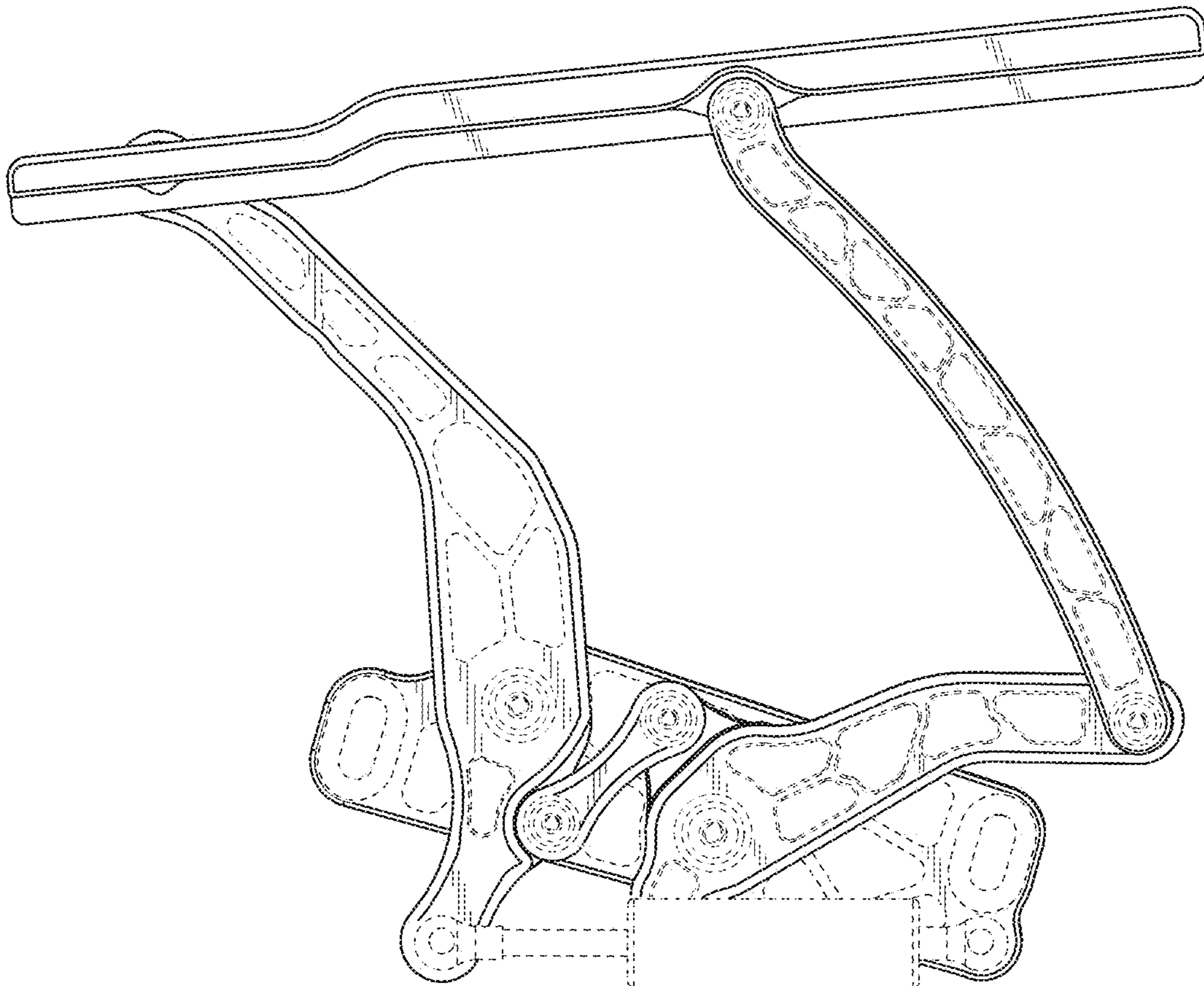


FIG. 4

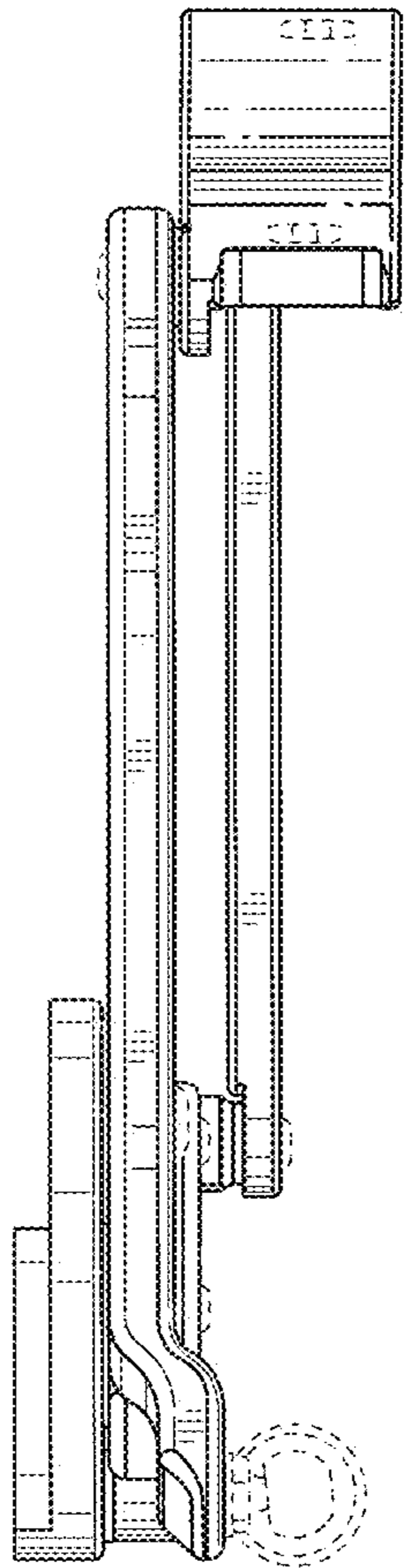


FIG. 5

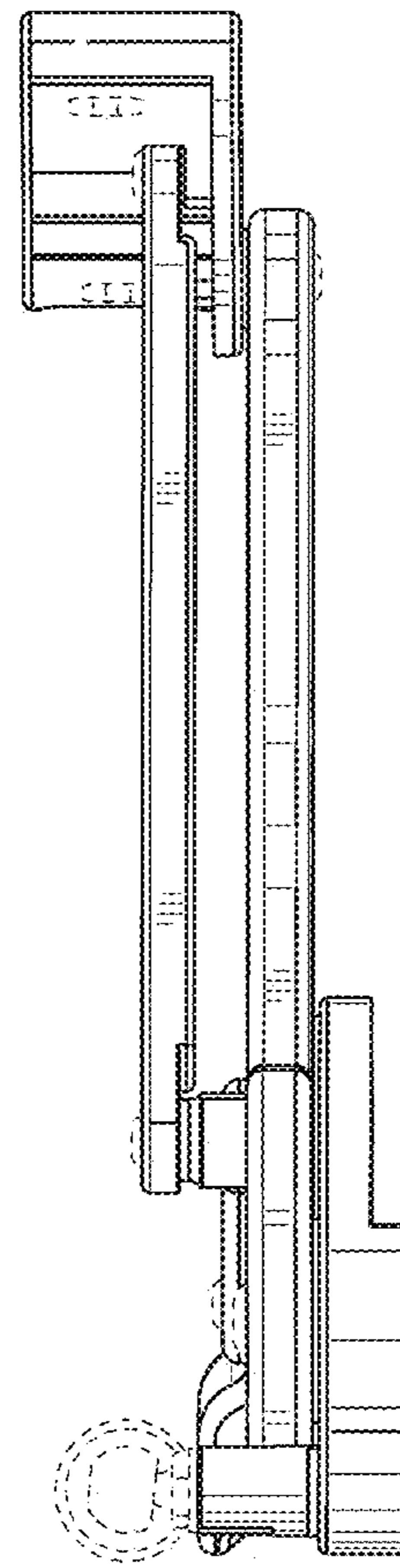


FIG. 6

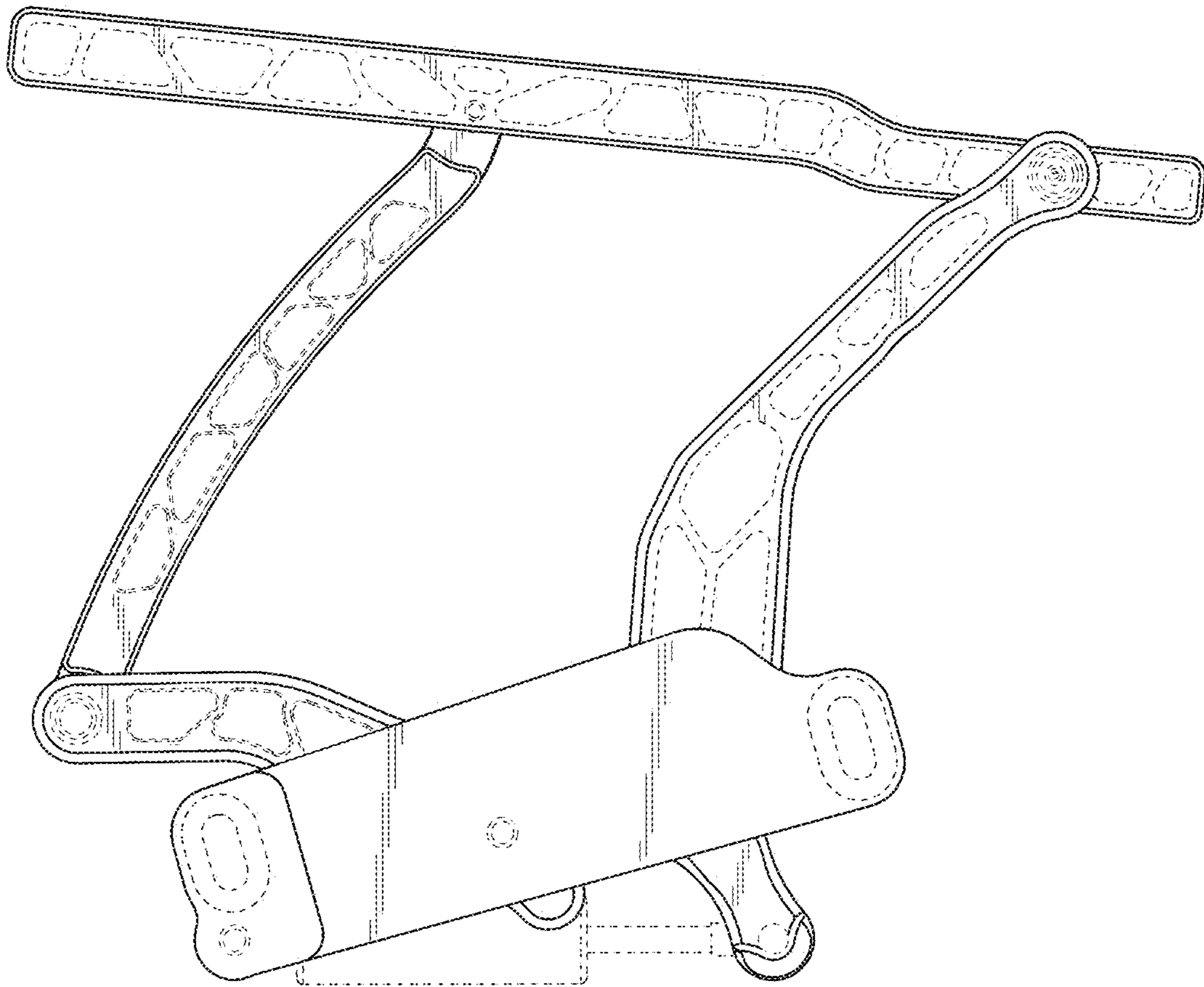


FIG. 7

