CF Industries Holdings, Inc. Form SC 13G/A February 16, 2016
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 13G
(Amendment No. 2)
Under the Securities Exchange Act of 1934
CF Industries Holdings, Inc.
(Name of Issuer)
Common Stock, \$0.01 par value
(Title of Class of Securities)
<u>125269100</u>
(CUSIP Number)

(Date of Event Which Requires Filing of this Statement)

Check the following box to designate the rule pursuant to which the Schedule is filed:

••	Rule 13d-1(b)
X	Rule 13d-1(c)
••	Rule 13d-1(d)

^{*}The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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Names of Reporting Persons
  I.R.S. Identification Nos. of above persons (entities only)
1.
  D. E. Shaw Heliant Manager, L.L.C.
  27-1289787
2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a)"
 (b)"
3.SEC Use Only
  Citizenship or Place of Organization
4.
  Delaware
Number of
Shares
             Sole Voting Power
Beneficially
Owned by 5.
Each
Reporting
             -0-
Person With
              Shared Voting Power
            6.9,759,774
              Sole Dispositive Power
            7.-0-
              Shared Dispositive Power
            8.
```

9,759,774

Aggregate Amount Beneficially Owned by Each Reporting Person

9. 9,759,774

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) "

Percent of Class Represented by Amount in Row (9)

11.

4.2%

Type of Reporting Person (See Instructions)

12.

00

-0-

Names of Reporting Persons
I.R.S. Identification Nos. of above persons (entities only) 1.
D. E. Shaw Heliant Adviser, L.L.C.
27-1289715
2. Check the Appropriate Box if a Member of a Group (See Instructions)
(a) " (b) "
3.SEC Use Only
Citizenship or Place of Organization 4.
Delaware
Number of
Shares
Beneficially Sole Voting Power
Owned by 5.
Each -0-
Reporting
Person With
Shared Voting Power
6. 9,759,774
7. Sole Dispositive Power

8.

9,759,774

Aggregate Amount Beneficially Owned by Each Reporting Person

9. 9,759,774

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) "

Percent of Class Represented by Amount in Row (9)

11.

4.2%

Type of Reporting Person (See Instructions)

12.

IA

-0-

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Names of Reporting Persons
  I.R.S. Identification Nos. of above persons (entities only)
1.
  D. E. Shaw & Co., L.L.C.
  13-3799946
2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a)"
 (b)"
3.SEC Use Only
  Citizenship or Place of Organization
4.
  Delaware
Number of
Shares
Beneficially
             Sole Voting Power
Owned by 5.
Each
             -0-
Reporting
Person
With
             Shared Voting Power
           6.9,776,674
           7. Sole Dispositive Power
```

8.

9,776,674

Aggregate Amount Beneficially Owned by Each Reporting Person

9. 9,776,674

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) "

Percent of Class Represented by Amount in Row (9)

11.

4.2%

Type of Reporting Person (See Instructions)

12.

00

-0-

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Names of Reporting Persons
  I.R.S. Identification Nos. of above persons (entities only)
1.
  D. E. Shaw & Co., L.P.
  13-3695715
2. Check the Appropriate Box if a Member of a Group (See Instructions)
 (a)"
 (b)"
3.SEC Use Only
  Citizenship or Place of Organization
4.
  Delaware
Number of
Shares
Beneficially
             Sole Voting Power
Owned by 5.
Each
             -0-
Reporting
Person
With
             Shared Voting Power
           6.9,992,278
           7. Sole Dispositive Power
```

8.

9,992,278

Aggregate Amount Beneficially Owned by Each Reporting Person

9. 9,992,278

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) "

Percent of Class Represented by Amount in Row (9)

11.

4.3%

Type of Reporting Person (See Instructions)

12.

IA, PN

-0-

Names of Reporting Persons 1.I.R.S. Identification Nos. of above persons (entities only) David E. Shaw 2. Check the Appropriate Box if a Member of a Group (See Instructions) (a)" **(b)**" **SEC Use Only 3.** Citizenship or Place of Organization 4. **United States** Number of **Shares** Beneficially **Sole Voting Power** Owned by 5. Each -()-Reporting Person With **Shared Voting Power 6.**9,992,278 7. Sole Dispositive Power

8.

9,992,278

Aggregate Amount Beneficially Owned by Each Reporting Person

9. 9,992,278

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) "

Percent of Class Represented by Amount in Row (9)

11.

4.3%

Type of Reporting Person (See Instructions)

12.

IN

Item 1.

(a) Name of Issuer

CF Industries Holdings, Inc.

(b) Address of Issuer's Principal Executive Offices

4 Parkway North, Suite 400

Deerfield, Illinois 60015

Item 2.

(a) Name of Person Filing

- D. E. Shaw Heliant Manager, L.L.C.
- D. E. Shaw Heliant Adviser, L.L.C.
- D. E. Shaw & Co., L.L.C.
- D. E. Shaw & Co., L.P.

David E. Shaw

(b) Address of Principal Business Office or, if none, Residence

The business address for each reporting person is:

1166 Avenue of the Americas, 9th Floor

New York, NY 10036

(c) Citizenship

- D. E. Shaw Heliant Manager, L.L.C. is a limited liability company organized under the laws of the state of Delaware.
- D. E. Shaw Heliant Adviser, L.L.C. is a limited liability company organized under the laws of the state of Delaware.
- D. E. Shaw & Co., L.L.C. is a limited liability company organized under the laws of the state of Delaware.
- D. E. Shaw & Co., L.P. is a limited partnership organized under the laws of the state of Delaware.

David E. Shaw is a citizen of the United States of America.

(d) Title of Class of Securities

Common Stock, \$0.01 par value

(e) CUSIP Number

125269100

Item 3. If this statement is filed pursuant to Rule 13d-1(b) or 13d-2(b) or (c), check whether the person filing is a:

Not Applicable

Item 4. Ownership

As of December 31, 2015:

(a) Amount beneficially owned:

9,759,774 shares

D. E. Shaw Heliant

This is composed of (i) 7,279,700 shares in the name of D. E. Shaw Kalon Portfolios, L.L.C.,

Manager, L.L.C.:

(ii) exposure to 1,375,000 shares through derivative instruments in the name of

D. E. Shaw Kalon Portfolios, L.L.C., and (iii) 1,105,074 shares in the name of

D. E. Shaw Special Opportunities Portfolios, L.L.C.

9,759,774 shares

D. E. Shaw Heliant Adviser, L.L.C.:

This is composed of (i) 7,279,700 shares in the name of D. E. Shaw Kalon Portfolios, L.L.C.,

(ii) exposure to 1,375,000 shares through derivative instruments in the name of

D. E. Shaw Kalon Portfolios, L.L.C., and (iii) 1,105,074 shares in the name of

D. E. Shaw Special Opportunities Portfolios, L.L.C.

9,776,674 shares

D. E. Shaw & Co., L.L.C.:

This is composed of (i) 7,279,700 shares in the name of D. E. Shaw Kalon Portfolios, L.L.C., (ii) exposure to 1,375,000 shares through derivative instruments in the name of D. E. Shaw Kalon Portfolios, L.L.C., (iii) 1,105,074 shares in the name of D. E. Shaw Special Opportunities Portfolios, L.L.C., (iv) 12,800 shares that Diffusion Markets, L.L.C. has the right to acquire through the exercise of listed call options, (v) 3,959 shares in the name of Diffusion Markets, L.L.C., and (vi) 141 shares in the name of D. E. Shaw Asymptote Portfolios, L.L.C.

9,992,278 shares

D. E. Shaw & Co., L.P.:

This is composed of (i) 7,279,700 shares in the name of D. E. Shaw Kalon Portfolios, L.L.C., (ii) exposure to 1,375,000 shares through derivative instruments in the name of D. E. Shaw Kalon Portfolios, L.L.C., (iii) 1,105,074 shares in the name of D. E. Shaw Special Opportunities Portfolios, L.L.C., (iv) 504 shares in the name of D. E. Shaw Valence Portfolios, L.L.C., (v) 215,100 shares that D. E. Shaw Valence Portfolios, L.L.C. has the right to acquire through the exercise of listed call options, (vi) 12,800 shares that Diffusion Markets, L.L.C. has the right to acquire through the exercise of listed call options, (vii) 3,959 shares in the name of Diffusion Markets, L.L.C., and (viii) 141 shares in the name of D. E. Shaw Asymptote Portfolios, L.L.C.

9,992,278 shares

This is composed of (i) 7,279,700 shares in the name of D. E. Shaw Kalon Portfolios, L.L.C., (ii) exposure to 1,375,000 shares through derivative instruments in the name of D. E. Shaw Kalon Portfolios, L.L.C., (iii) 1,105,074 shares in the name of D. E. Shaw Special Opportunities Portfolios, L.L.C., (iv) 504 shares in the name of D. E. Shaw Valence Portfolios, L.L.C., (v) 215,100 shares that D. E. Shaw Valence Portfolios, L.L.C. has the right to acquire through the exercise of listed call options, (vi) 12,800 shares that Diffusion Markets, L.L.C. has the right to acquire through the exercise of listed call options, (vii) 3,959 shares in the name of Diffusion Markets, L.L.C., and (viii) 141 shares in the name of D. E. Shaw Asymptote Portfolios, L.L.C.

David E. Shaw:

(b) Percent of class:

D. E. Shaw Heliant Manager, L.L.C.: 4.2%
D. E. Shaw Heliant Adviser, L.L.C.: 4.2%
D. E. Shaw & Co., L.L.C.: 4.2%
D. E. Shaw & Co., L.P.: 4.3%
David E. Shaw: 4.3%

(c) Number of shares to which the person has:

(i) Sole power to vote or to direct the vote:

D. E. Shaw Heliant Manager, L.L.C.: -0- shares
D. E. Shaw Heliant Adviser, L.L.C.: -0- shares
D. E. Shaw & Co., L.L.C.: -0- shares

D. E. Shaw & Co., L.P.: -0- shares
David E. Shaw: -0- shares

(ii) Shared power to vote or to direct the vote:

 D. E. Shaw Heliant Manager, L.L.C.:
 9,759,774 shares

 D. E. Shaw Heliant Adviser, L.L.C.:
 9,759,774 shares

 D. E. Shaw & Co., L.L.C.:
 9,776,674 shares

 D. E. Shaw & Co., L.P.:
 9,992,278 shares

 David E. Shaw:
 9,992,278 shares

(iii) Sole power to dispose or to direct the disposition of:

D. E. Shaw Heliant Manager, L.L.C.:

D. E. Shaw Heliant Adviser, L.L.C.:

D. E. Shaw & Co., L.L.C.:

D. E. Shaw & Co., L.P.:

O- shares

O- shares

O- shares

O- shares

O- shares

(iv) Shared power to dispose or to direct the disposition of:

D. E. Shaw Heliant Manager, L.L.C.:

D. E. Shaw Heliant Adviser, L.L.C.:

D. E. Shaw & Co., L.L.C.:

D. E. Shaw & Co., L.P.:

David E. Shaw:

9,759,774 shares

9,776,674 shares

9,992,278 shares

9,992,278 shares

David E. Shaw does not own any shares directly. By virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co., Inc., which is the general partner of D. E. Shaw & Co., L.P., which in turn is the manager and investment adviser of D. E. Shaw Valence Portfolios, L.L.C. and the managing member of (i) D. E. Shaw Heliant Adviser, L.L.C., which in turn is the investment adviser of D. E. Shaw Kalon Portfolios, L.L.C. and D. E. Shaw Special Opportunities Portfolios, L.L.C., and (ii) D. E. Shaw Adviser, L.L.C., which in turn is the investment adviser of D. E. Shaw Asymptote Portfolios, L.L.C., which in turn is the managing member of Diffusion Markets Holdings, L.L.C., which in turn is the managing member of Diffusion Markets, L.L.C., and by virtue of David E. Shaw's position as President and sole shareholder of D. E. Shaw & Co. II, Inc., which is the managing member of D. E. Shaw & Co., L.L.C., which in turn is the managing member of (i) D. E. Shaw Heliant Manager, L.L.C., which in turn is the manager of D. E. Shaw Kalon Portfolios, L.L.C. and D. E. Shaw Special Opportunities Portfolios, L.L.C., and (ii) D. E. Shaw Manager, L.L.C., which in turn is the manager of D. E. Shaw Asymptote Portfolios, L.L.C., which in turn is the managing member of Diffusion Markets Holdings, L.L.C., which in turn is the managing member of Diffusion Markets, L.L.C., David E. Shaw may be deemed to have the shared power to vote or direct the vote of, and the shared power to dispose or direct the disposition of, the 9,992,278 shares as described above constituting 4.3% of the outstanding shares and, therefore, David E. Shaw may be deemed to be the beneficial owner of such shares. David E. Shaw disclaims beneficial ownership of such 9,992,278 shares.

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following x.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not Applicable

Item Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on Bythe Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of Group

Not Applicable

Item 10. Certification

By signing below, each of D. E. Shaw Heliant Manager, L.L.C., D. E. Shaw Heliant Adviser, L.L.C., D. E. Shaw & Co., L.L.C., D. E. Shaw & Co., L.P., and David E. Shaw certify that, to the best of such reporting person's knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having such purposes or effect.

SIGNATURE

After reasonable inquiry and to the best of their knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct. Powers of Attorney, dated December 16, 2014, granted by David E. Shaw in favor of Nathan Thomas, are attached hereto.

Dated: February 16, 2016

D. E. Shaw Heliant Manager, L.L.C.

By: <u>/s/ Nathan Thomas</u> Nathan Thomas Authorized Signatory

D. E. Shaw Heliant Adviser, L.L.C.

By: <u>/s/ Nathan Thomas</u>
Nathan Thomas
Chief Compliance Officer

D. E. Shaw & Co., L.L.C.

By: <u>/s/ Nathan Thomas</u> Nathan Thomas Authorized Signatory

D. E. Shaw & Co., L.P.

By: <u>/s/ Nathan Thomas</u>
Nathan Thomas
Chief Compliance Officer

David E. Shaw

By: <u>/s/ Nathan Thomas</u>
Nathan Thomas
Attorney-in-Fact for David E. Shaw