

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

A. O. SMITH CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

39-0619790
(I.R.S. Employer
Identification No.)

11270 West Park Place
Milwaukee, Wisconsin
(Address of principal executive offices)

53224-9508
(Zip Code)

A. O. Smith Combined Incentive Compensation Plan
(Full title of the plan)

Copy to:

James F. Stern, Esq.
Executive Vice President, General Counsel
and Secretary
A. O. Smith Corporation
11270 West Park Place
Milwaukee, Wisconsin 53224-9508
(414) 359-4000
(Name, address and telephone number,
including area code, of agent for service)

Patrick G. Quick, Esq.
Foley & Lardner LLP
777 East Wisconsin Avenue
Milwaukee, Wisconsin 53202
(414) 271-2400

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check One):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$1 par value	1,250,000 shares	\$56.085(2)	\$70,106,250(2)	\$4,998.58

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, this Registration Statement also covers an indeterminate number of additional shares of Common Stock that may become issuable as a result of stock splits, stock dividends or similar transactions pursuant to the anti-dilution provisions of the A. O. Smith Combined Incentive Compensation Plan.
- (2) Estimated pursuant to Rule 457(c) under the Securities Act of 1933 solely for the purpose of calculating the registration fee based on the average of the high and low prices for A. O. Smith Corporation Common Stock on the New York Stock Exchange on November 1, 2010.

**STATEMENT PURSUANT TO
GENERAL INSTRUCTION E TO FORM S-8**

The purpose of this Registration Statement is to register 1,250,000 additional shares of Common Stock, \$1 par value per share, of A. O. Smith Corporation (the "Company") in connection with the A. O. Smith Combined Incentive Compensation Plan.

Pursuant to General Instruction E of Form S-8, the contents of the Company's Registration Statements on Form S-8 (Reg. Nos. 333-92428 and 333-144950), including the documents incorporated by reference therein, are incorporated by reference into this Registration Statement).

**PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

Item 8. Exhibits.

The exhibits filed herewith or incorporated herein by reference are set forth in the attached Exhibit Index.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ RONALD D. BROWN _____ Ronald D. Brown	Director	November 8, 2010
/s/ WILLIAM F. BUEHLER _____ William F. Buehler	Director	November 8, 2010
/s/ GLOSTER B. CURRENT, JR. _____ Gloster B. Current, Jr.	Director	November 8, 2010
/s/ WILLIAM P. GREUBEL _____ William P. Greubel	Director	November 8, 2010
/s/ ROBERT J. O'TOOLE _____ Robert J. O'Toole	Director	November 8, 2010
/s/ MATHIAS F. SANDOVAL _____ Mathias F. Sandoval	Director	November 8, 2010
/s/ BRUCE M. SMITH _____ Bruce M. Smith	Director	November 8, 2010
/s/ MARK D. SMITH _____ Mark D. Smith	Director	November 8, 2010
/s/ IDELLE K. WOLF _____ Idelle K. Wolf	Director	November 8, 2010
/s/ GENE C. WULF _____ Gene C. Wulf	Director	November 8, 2010

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Exhibit Description</u>
(4.1)	A. O. Smith Combined Incentive Compensation Plan (incorporated by reference to Exhibit A to the Company's Definitive Proxy Statement on Schedule 14A for the Company's 2009 Annual Meeting of Shareholders, filed on March 5, 2009 (File No. 1-475)).
(4.2)	Amended and Restated Certificate of Incorporation of A. O. Smith Corporation (incorporated by reference to Exhibit 3(i) to the Company's Form 8-K filed on April 22, 2009).
(4.3)	Credit Agreement, dated as of February 17, 2006, among A. O. Smith Corporation, various financial institutions, M&I Marshall & Ilsley Bank, U.S. Bank National Association and Wells Fargo Bank, N.A., as Co-Documentation Agents, and the Bank of America, N.A., as Administrative Agent (incorporated by reference to the Company's Form 8-K filed on February 23, 2006 (File No. 1-475)).
(4.4)	The Registrant has instruments that define the rights of holders of long-term debt that are not being filed with this Registration Statement in reliance upon Item 601(b)(4)(iii) of Regulation S-K. The Registrant agrees to furnish to the Securities and Exchange Commission, upon request, copies of these instruments.
(4.5)	Form of A.O. Smith Corporation Executive Incentive Compensation Award Agreement (incorporated by reference to Exhibit 4.5 to the Company's Form S-8 Registration Statement filed on July 30, 2007 (Reg. No. 333-144950)).
(5)	Opinion of James F. Stern.
(23.1)	Consent of Ernst & Young LLP.
(23.2)	Consent of James F. Stern (contained in Exhibit (5)).
(24)	Power of Attorney (contained on the signature page hereto).

LEGAL DEPARTMENT

P.O. Box 245008
Milwaukee, WI 53224-9508
Direct Dial Number: (414) 359-4031
E-Mail Address: jstern@aosmith.com

November 8, 2010

A. O. Smith Corporation
11270 West Park Place
Milwaukee, WI 53224

Gentlemen:

I have acted as counsel for A. O. Smith Corporation (the "Company") in connection with the preparation of a Registration Statement on Form S-8 ("Registration Statement") to be filed by you with the Securities and Exchange Commission under the Securities Act of 1933, as amended ("Securities Act"), relating to 1,250,000 shares of Common Stock, \$1 par value per share ("Common Stock"), of the Company, which may be issued pursuant to the A. O. Smith Combined Incentive Compensation Plan (the "Plan").

In this connection, I have examined (a) signed copies of the Registration Statement; (b) the Restated Certificate of Incorporation and By-Laws, as amended to date, of the Company; (c) copies of resolutions of the Board of Directors and stockholders of the Company relating to the Plan; (d) the Plan and applicable forms of awards agreements under the Plan; and (e) such other proceedings, documents and records as I have deemed necessary for purposes of giving this opinion. In addition, I have made such investigations and have reviewed such other documents as I have deemed necessary or appropriate under the circumstances. With respect to all of the foregoing documents, I have assumed the genuineness of all signatures, the authenticity of all documents submitted to me as originals and the conformity to originals of all documents submitted to me as certified or reproduced copies.

Based upon the foregoing, I am of the opinion that:

1. The Company is a corporation duly organized and validly existing under the laws of the State of Delaware.
2. The Common Stock shares have been duly authorized and, when issued by the Company pursuant to the terms and conditions of the Plan, and as contemplated in the Registration Statement, will be validly issued, fully paid and nonassessable.

I hereby consent to the use of this opinion as an exhibit to the Registration Statement. In giving this consent, I do not admit that I am an expert within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required by Section 7 of said Act.

Very truly yours,

A. O. SMITH CORPORATION

/s/James F. Stern

Executive Vice President,
General Counsel and Secretary

Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to A. O. Smith Combined Incentive Compensation Plan of our reports dated February 26, 2010, with respect to the consolidated financial statements and schedule of A. O. Smith Corporation and the effectiveness of internal control over financial reporting of A. O. Smith Corporation, included in its Annual Report (Form 10-K) for the year ended December 31, 2009, filed with the Securities and Exchange Commission.

/s/Ernst & Young LLP

Milwaukee, Wisconsin
November 5, 2010