# Scientific American.

**JRIFFIN** 

A perfect pulverizer of all refractory substances by either

the wet or dry process. It works better and at less expense than any other Mill, and is conceded to be the only perfect

## **PROPOSALS**.

MILL

HENRY CAREY BAIRD & CO. Industrial Publishers. Booksellers, and Importers, St 0 Walnut St., Philadelphia, Pa., U. S. A. S10 Walnut St., Philadelphia, Pa., U. S. A. ST our new and Revised Catalogue of Practical and Scientific Books, S8 pages, Svo, and our other Catalogues and Circulars, the whole covering every branch of Sci-ence applied to the Arts, sent free and free of postage to any one in any part of the world who will furnish his address

Founded by Mathew Carey, 1785.



#### 12,500 Receipts. 708 Pages. Price \$5.

Bound in Sheep, **\$6.** Half-Morocco, **\$6.50.** This splendid work contains a careful compliation of the most useful Receipts and Replies given in the Notes and Queries of correspondents as published in the Noi-ent life A merican during the pastifity years; together with many valuable and important additions.

Over Twelve Thousand selected Receipts are here collected; nearly every branch of the useful arts being represented. It is by far the most comprehensive volume of the kind ever placed before the public.

The work may be regarded as the product of the stud-ies and practical experience of the ablest chemists and workers in all parts of the world; the information given being of the highest value, arranged and condensed in concise form convenient for ready use.

Almost every inquiry that can be thought of, relating to formulæ used in the various manufacturing indus-tries, will here be found answered.

Instructions for working many different processes in the arts are given.

Those who are engaged in any branch of industry probably will find in this book much that is of practical value in their respective callings.

Those who are in search of independent business or employment, relating to the home manufacture of sam-ble articles, will find in it hundreds of most excellent uggestions.

F Send for Descriptive Circular. MUNN & CO., Publishers, SCIENTIFIC AMERICAN OFFICE, 361 Broadway, New York



munn & co., Publishers SCIENTIFIC AMERICAN S25 to \$50 per werk, Ladiz ur form all newsdealers.

INTERESTING FACTS CONCERN-



N IDEAL STUB PEN-Esterbrook's Jackson Stub, No. 442 A A specially EASY WRITER, a GOOD INK HOLDER and a DELIGHT to those who use a STUB PEN. ASK YOUR STATIONER FOR THEM. Price, \$1.00 per gross. THE ESTERBROOK STEEL PEN CO., 26 John St., New York.

## PERFORATORS OF ALL METALS

For Cotton, Oil and Rice Mills, Sugar Honses, Distilleries, Phosphate and Fertilizer Works, Mining and Concentrating, Gas and Water Works, Elevators, Threehers, Sepa-rators, Corn Shellers, and all kinds of Grain Cleaning Machinery, Heavy Steel and Iron Plates and Cylinders for Screening Ore, Coal, Stone. For Filtry, Strainers, Ventila-tors, Oil Gas and Vapor Stoves and all special purposes. Special sizes for Coffee Clean-ing and Roasting Machinery. Perforated Tim and Brass.

The Harrington & King Perforating Co., Chicago, and 284 Pearl St., N.Y



The prices of the different publications in the United States, Canada, and Mexico are as follows:

RA" ES BY MAIL.	
The Scientific American (weekly), one year -	\$3.00
The Scientific American Supplement (weekly), one year,	5.00
The Scientific American, Spanish Edition (month- ly), one year,	3.00
The Scientific American Architects and Builders Edition (monthly), one year	2.50

### COMBINED RATES.

The Scientific American and Supplement	\$7.00
The Scientific American and Architects and Builders Edition,	
The Scientific American, Supplement, and Archi-	
tects and Builders Edition,	9.00

Proportionate Rates for Six Months. This includes rostage, which we pay. Remit by postal or express money order, or draft to order of

MUNN & CO., 361 Broadway, New York