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M. A. A., of N. Y.—You can gild letters on glass by mixing powdered gold with thick m-arabic and powdered borax. Trace your device with the gold on china, and afterward bake it in a hot oven, the g m is thus burnt and the borax trifurates and cements the gold to the ware.

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G. W. G., of Maine.—We see no ground for your hypothesis that the force necessary to overcome in obtaining speed for ships is analogous to the resistance offered by bodies falling out of a perpendicular.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, March 16, 1864, to Wednesday, March 23, 1864:— B. M., of N. Y., \$25; C. A. S., of N. Y., \$35; J. B. R., of N. Y., \$23; L. F. B., of N. Y., \$41; G. L. G., of N. Y., \$16; G. S. C., of N. Y., \$16; C. F., of Ill., \$20; D. H. & P., of Wis., \$20; H. F., of N. J., \$10; E. B., of Cuba, \$20; L. H., of N. Y., \$20; W. T., of Ohio, \$20; P. A. C., of Maine, \$16; E. P., of Ill., \$20; A. C. K., of Wis., \$16; F. P., of Conn., \$42; W. F., of Conn., \$16; J. S., of Iowa, \$20; C. L., of Canada, \$30; A. R., of N. Y., \$34; R. S., of N. Y., \$16; J. H., Jr., of Mich., \$16; W. A. J., of La., \$11; G. L., of N. Y., \$58; L. V. H., of N. Y., \$162; E. H., of Mass., \$15; J. E. A. R., of Cal., \$25; G. L. J., of N. Y., \$25; D. R. G., of Canada, \$16; E. E., of Ill., \$25; F. B., of Bavaria, \$26; W. R., of N. J., \$18; J. McF., of N. Y., \$25; H. S. B., of La., \$20; J. M., of N. Y., \$162; G. W. A., of Western Va., \$20; W. L. R. V., of N. Y., \$20; A. L. VanB., of N. Y., \$16; R. D., of Vt., \$51; C. & B., of N. Y., \$70; W. H. J., of N. Y., \$20; G. D., of Mass., \$16; H. B., of N. Y., \$16; G. G., of N. H., \$41; C. T. F., of N. Y., \$16; T. L. W., of Wis., \$20; T. L. M., of Ohio, \$16; D. C. & L. S. R., of N. B. Territory, \$40; J. A. H., of Maine, \$25; J. W., of Mass., \$16; D. & B., of N. Y., \$16; D. R. W., of Iowa, \$20; A. A., of Ill., \$25; A. E. K., of Pa., \$25; L. J., of Conn., \$16; W. & V., of N. J., \$35; F. B., of N. Y., \$25; L. H., Jr., of N. J., \$25; T. & L., of Mass., \$16; E. W., of N. Y., \$16; H. L., of N. Y., \$35; A. P. S., of N. Y., \$20; F. P., of N. Y., \$20; G. W. W., of N. Y., \$30; W. H. F., of Pa., \$25; S. P. B., of N. Y., \$25; O. E. W., of Pa., \$15; W. B. K., of N. H., \$25; W. W., of Cal., \$46; J. W. J., of Mass., \$16; F. O., of Pa., \$10; C. W., of Vt., \$15; H. J. M., of Ohio, \$15; L. McG., of Ill., \$16; A. W. P., of Ill., \$32; J. T. P., of Ind., \$15; D. C. H., of Pa., \$16; H. V. B., of N. Y., \$16; H. W., of Wis., \$17; M. B. D., of Cal., \$25; A. B. L., of Conn., \$20; W. O., of Ill., \$25; R. P., of Maine, \$16; H. G. D., of N. Y., \$25; L. C., of Russia, \$26; A. P., of N. Y., \$56.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, stating the amount and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, March 16, 1864, to Wednesday, March 23, 1864:—

B. M., of N. Y.; W. R., of N. J.; C. A. S., of N. Y.; J. B. R., of N. Y.; S. & C., of N. Y.; J. McF., of N. Y.; F. S., of Pa.; E. P., of Ill.; A. A., of Ill.; O. L., of N. Y. (2 cases); W. B. K., of N. H.; E. B., of Ind.; F. R., of Conn. (2 cases); J. A. H., of Maine; A. E. K., of Pa.; S. P. B., of N. Y.; H. & B., of Ill.; V. H. E., of N. Y.; A. H. W., of England; W. W., of Cal.; T. L. W., of Wis.; T. E., of England; A. T., of Pa. (2 cases); W. H. F., of Pa.; M. B. D., of Colorado Territory; F. B., of Bavaria; E. E., of Ill.; W. O., of Mass.; L. H., Jr., of N. J.; G. L. J., of N. Y.; L. G., of Russia; M. G. D., of N. Y.; A. P., of N. Y.

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Chesney's Sorghum Evaporator.

The sorghum sugar interest is rapidly becoming a prominent one in this country, and it is but reasonable to infer that from the progress inventors are making in reducing the cost of manufacture, it will, at no distant day take a high rank among the products of the North. With flax cotton as a substitute for cotton itself, and Northern sugar, we may rely confidently upon cheap clothing, and a great reduction in the price of the necessaries of life. When these blessings, for such they are in reality, are obtained, let us not forget that we owe them mainly to the energy and enterprise of inventors and agriculturists, and that from the cold reception and poor success which attended the first efforts to introduce the culti-

all the dampers are turned down, as shown in Fig. 2, and the fire passes under them and up the chimney as shown by the arrows. Should it be desirable, however, to concentrate the heat on any one pan, either at the top or bottom, the dampers in the other flues are closed, and the heat from all the furnaces passes under the one required, and this does not in any way affect the draft, as the flue H, next the furnaces, remains open in any case, and connects with the chimney through the passage under the pans; whichever one is open at the time.

Any one of the pans can be removed without injuring the draft, as the dampers aforesaid close the openings effectually and send the heat from the furnace into the other channels. These dampers also

and cleaner sugar is produced. This is an important and desirable feature.

This is a very complete and useful evaporator, and has been highly commended by competent judges. It is the invention of Jesse C. Chesney, of Abingdon, Ill., and was patented through the Scientific American Patent Agency, Dec. 15th 1863. See advertisement on another page.

WINDSOR PARK covers 3,800 acres; Richmond, 2,468; Hampton Court, 1,800; Kew, 683; Regent's, 478; Kensington, 362; Hyde, 289; Victoria, 249; Greenwich, 135; Battersea, 175; Green and St. James, 50 each; Phoenix Park, Dublin, 1,752; Central, New York, 850; Bois de Boulogne, France, 2,095; Tzarsko-Selo, Russia, 350; Thiergarten, Prussia, 210. In Southern Europe the most noted place of public resort is the Villa Real, in Naples. The Bois de Boulogne has a carriage-drive thirty-five miles in length, and the Central Park, New York, has a drive nine miles long.

THE height of the barometer at noon was found by Mr. Raymond to be the same as the mean height for the day.

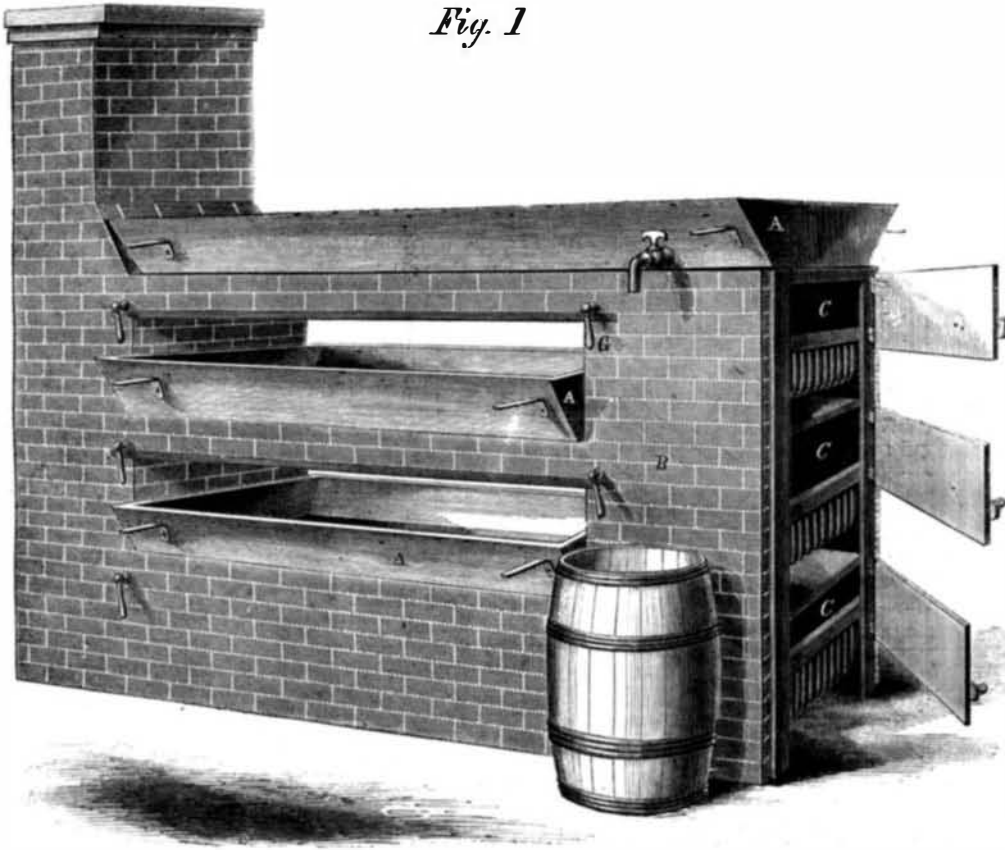


Fig. 1

CHESNEY'S SORGHUM EVAPORATOR.

vation of the cane at the North, it has now become, or is fast tending in that direction, a staple product.

The evaporating apparatus illustrated herewith is intended to place the temperature of the liquid completely under the control of the operator, and this end is attained in the following manner:

The pans A, are set in masonry B, which is provided with furnaces C; one for each pan; these

afford a means for controlling the temperature under the pans without turning the heat off completely as they may be, but partially closed, thus allowing some of the calorific to enter while the bulk of it disappears up the chimney or under the other pans.

The inventor claims that his evaporator will burn wood as well, and coal better than those ordinarily in use, and that it is very economical in fuel. The

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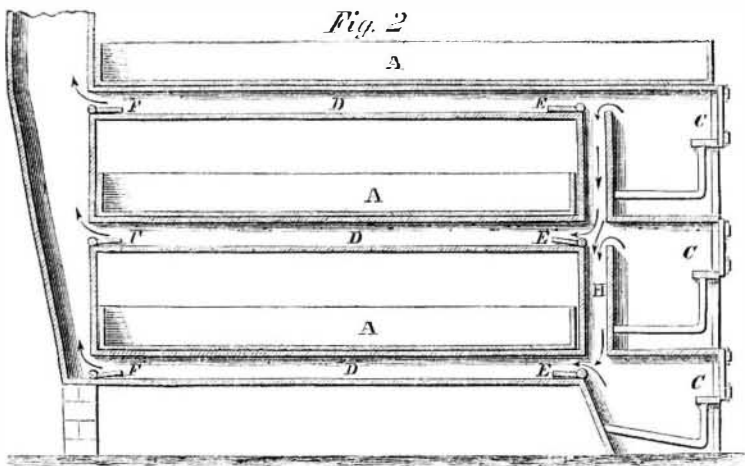


Fig. 2

urnaces are all closed with doors and have grates and draft openings as usual. In Fig. 2, a section of this evaporator is shown, which will enable the reader to understand the principle clearly. In order to control the temperature of the heated juice, the flues D, which lead from each furnace, are fitted with dampers E and F, at each end; these are turned by handles rom the outside. When it is simply desired to boil the liquid or pass the heat under all the pans alike,

scum and impurities can be removed before it is drawn off into the finishing pan. Also that the heat from the upper pans is reflected to the lower ones, and that from this reason and the heat below evaporation goes on more rapidly. The temperature is so completely under control that burning the juice is impossible except through carelessness, and by the adoption of a faucet for drawing off the liquid instead of using a ladle, as is generally practiced, much better