

J. F. STAIRS.

Coating Oakum with Tar, &c.

No. 146,105.

Patented Dec. 30, 1873.

Fig. 1.

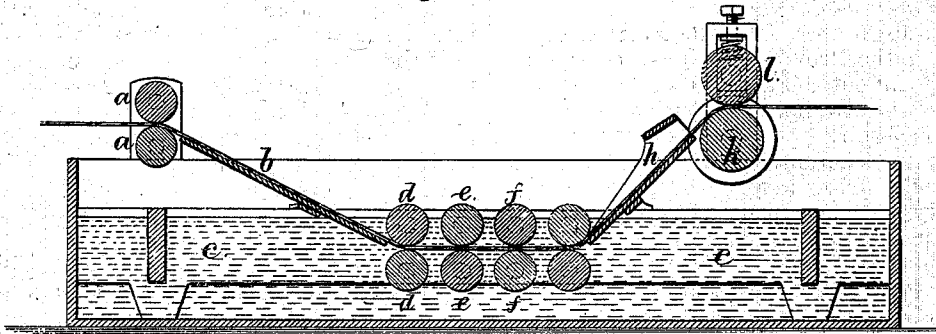
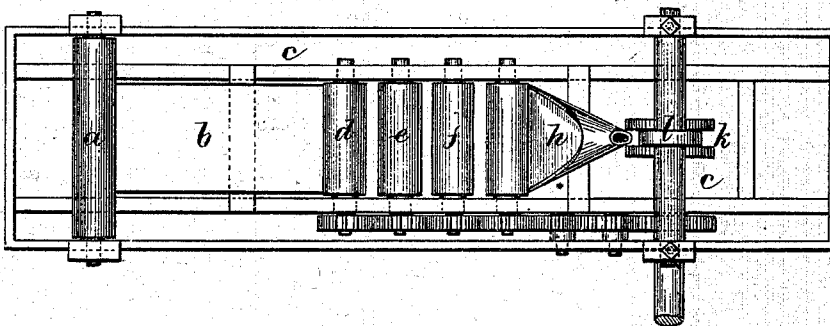


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN F. STAIRS, OF HALIFAX, CANADA.

IMPROVEMENT IN COATING OAKUM WITH TAR, &c.

Specification forming part of Letters Patent No. **146,105**, dated December 30, 1873; application filed December 3, 1873.

To all whom it may concern:

Be it known that I, JOHN F. STAIRS, of Halifax, in the Province of Nova Scotia, Canada, have invented an Improvement in Tarring Tow and Oakum, of which the following is a specification:

Tow and oakum have been tarred in mass, and difficulty arises in applying such tar with uniformity. My machine is made for tarring the tow or oakum with uniformity and in detail, so that the ultimate proportion of tar to fiber can be regulated at will.

I make use of rollers in the tar, through which the sliver of tow or oakum passes, and by means of which the tar is worked into the fiber. The sliver is then passed through a concentrating-tube and a pair of rollers above the tar, that press out the surplus tar, and according to the pressure applied, so a greater or less amount of tar will remain.

In the drawing, Figure 1 is a vertical section of the machine, and Fig. 2 is a plan.

The sliver of tow or oakum passes from any suitable machine or holder in between the feed-rollers *a a*, down the inclined trough *b*, into the tar contained in the tank or kettle *c*, and it is preferable to employ heat, so that the tar will be more limpid. The sliver passes between two or more pairs of rollers, *d d*, *e e*, *f f*, that are in the tar, and serve to work the same thoroughly into the fiber. The concentrating-tube *h* serves to direct the sliver in a compact roving between the rollers *k l*, that press out the surplus tar.

It is preferable to use a grooved roller, *k*, into the groove of which the roller *l* passes, so that the roving or sliver is preserved in a compact form. According to the pressure given by the rollers *k l*, so more or less tar will be pressed out. It is preferable to mount the shaft of the roller *l* in movable boxes, to which springs adjusted by screws or weighted levers are applied, the former being represented in the drawing.

If the sliver is sufficiently strong to be drawn through between the respective rollers and through the tar, then the rollers *d e f* will not require to be driven by power. It is, however, generally necessary to apply gearing, as shown, or equivalent mechanism for revolving the said rollers.

By the means aforesaid any desired quantity of tar can be applied to the oakum or tow, and great uniformity in the proportion is obtained.

I claim as my invention—

The means described for tarring tow or oakum, consisting of the rollers *a*, trough *b*, concentrating-tube *h*, and squeezing-rollers *k l*, in combination with the tar-kettle *c* and a pair of rollers in such tar-kettle, substantially as set forth.

Signed by me this 29th day of November, A. D. 1873.

JOHN F. STAIRS.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.