

E. CARY.

DRUMS FOR DRYING PAPER.

No. 177,205.

Patented May 9, 1876.

Fig. 1.

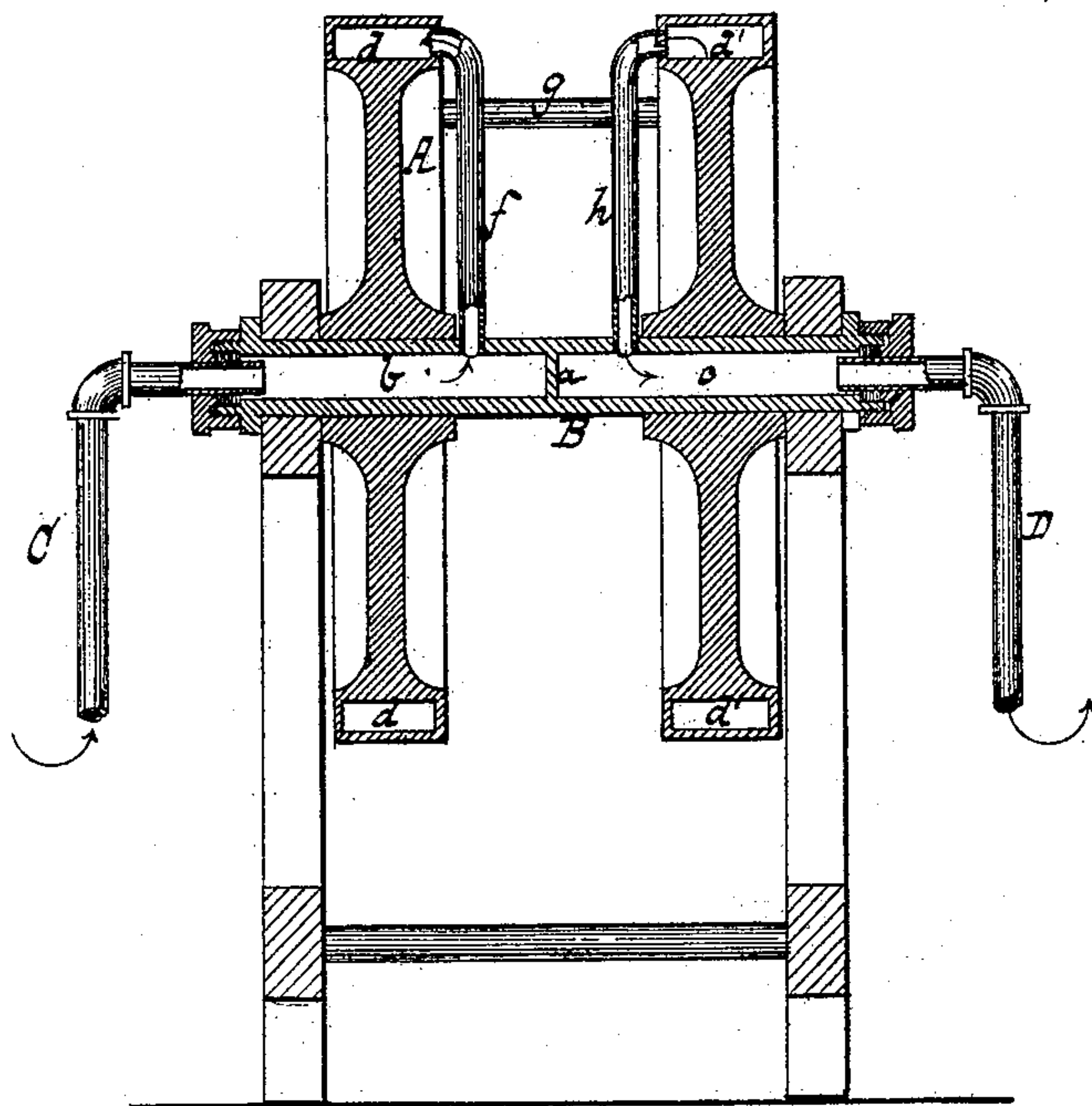
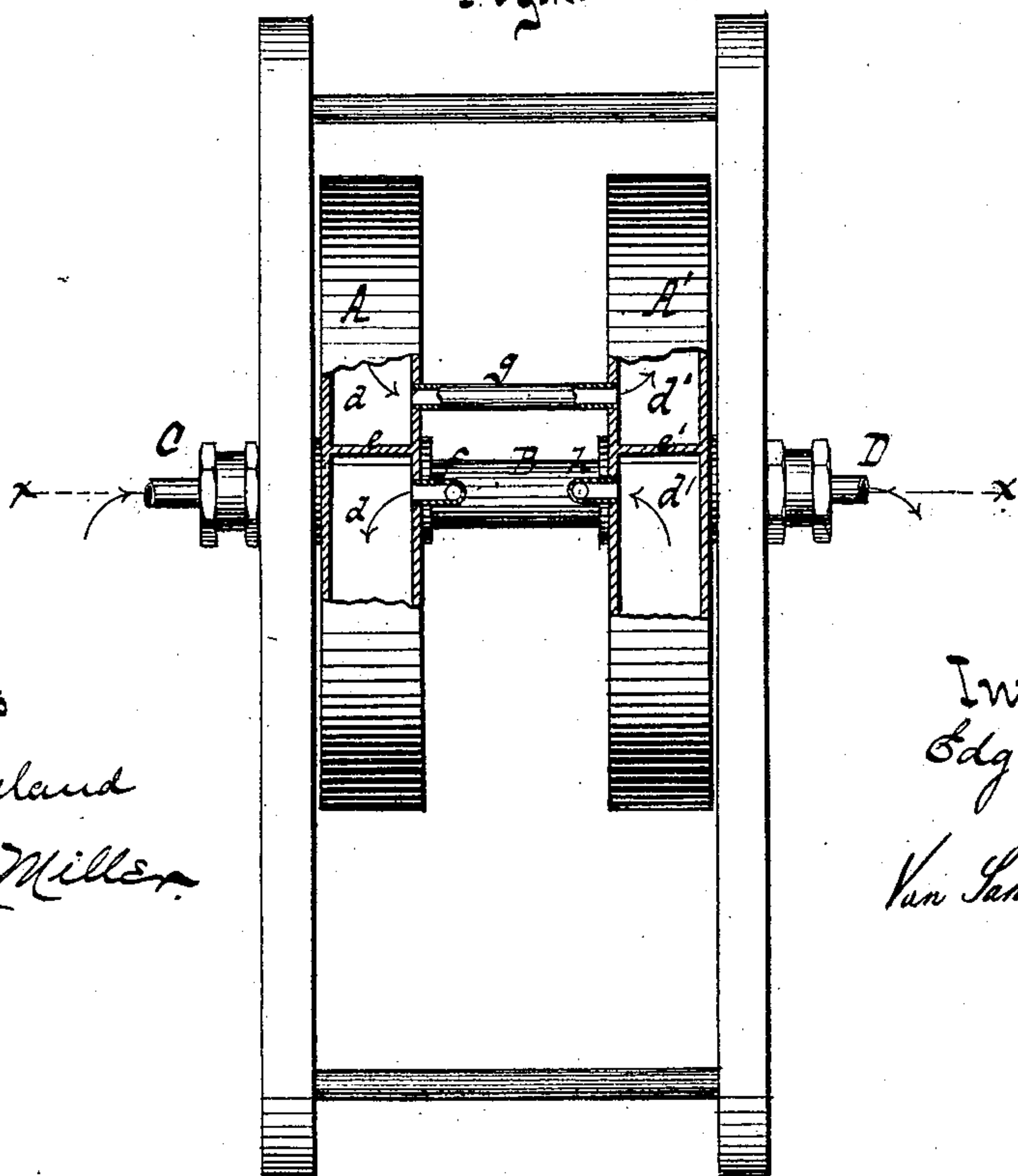


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

EDGAR CARY, OF NEW YORK, N. Y.

IMPROVEMENT IN DRUMS FOR DRYING PAPER.

Specification forming part of Letters Patent No. **177,205**, dated May 9, 1876; application filed April 6, 1876.

To all whom it may concern:

Be it known that I, EDGAR CARY, of the city, county, and State of New York, have invented a new and Improved Drum for Drying Paper and other materials, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical section in the plane *x x*, Fig. 2. Fig. 2 is a sectional plan or top view.

Similar letters indicate corresponding parts.

This invention relates to a drying-drum, which is constructed in two or more sections, through which steam, heated air, or other heating medium is caused to circulate, and which are so arranged in relation to each other that the heat emanating from the same is caused to act only on certain portions of the paper or other material to be dried, while other portions of said material are not brought in contact with the heated surface. The sections of the heating-drum are constructed with hollow rims, and they are mounted on a tubular shaft, so that the heating medium admitted to one compartment of said shaft is compelled to circulate first through the hollow rim of one section of the heating-drum, and then through the hollow rim of the second section before it is permitted to escape through the exhaust-compartment of the tubular shaft, and by these means the sections of the drying-drum are heated uniformly and with economy.

In the drawing, the letters *A A'* designate a drying-drum, which is made in two sections mounted on a common shaft, *B*, at such distance apart as the nature of the articles to be dried may demand. If the drum is to be used, for instance, for drying the pasted ends of paper collars, said sections will be so placed that the pasted ends of the collars will come in contact with their heated surfaces, while the remaining portions of the collar are not heated. For drying other articles the position of the sections *A A'* in relation to each other may be changed, or three or more such sections may be used, if desirable. The shaft *B* is tubular, and its bore is divided by a partition, *a*, in two compartments, *b c*, one of which communicates with a pipe, *C*, for supplying steam, hot-air, or another heating medium, while the other compartment communicates

with an exhaust-pipe, *D*. The rims *d d'* of the sections *A A'* are hollow, and each of the annular chambers thus formed is provided with a partition, *e* or *e'*. From one side of the partition *e* in the rim *d* extends a pipe, *f*, to the compartment *b* of the tubular shaft *B*, and from the opposite side of said partition extends a pipe, *g*, to one side of the partition *e'* in the rim *d'*. From the opposite side of this partition extends a pipe, *h*, to the compartment *c* of the tubular shaft. The pipes *C* and *D* are secured in the ends of the shaft *B* by means of stuffing-boxes, so that said shaft can be revolved while the pipes remain stationary. Instead of applying the pipes *f* and *h*, as shown in the drawing, suitable channels might be cast in the bodies of the sections *A A'*. The heating medium which is admitted through the pipe *C*, passes through the compartment *b* and pipe or channel *f* to the hollow rim *d*, and after circulating through this rim it passes through the pipe *g* into the hollow rim *d'*, where it circulates, until it reaches the pipe or channel *h*, through which it passes into the compartment *c*, whence it exhausts through the pipe *D*. By constructing a heating-drum with a hollow rim, through which the heating medium is caused to circulate, the drum can be economically and uniformly heated, and by combining two or more sections, *A A'*, in the manner described, the heating medium is caused to circulate to all the sections, and the parts of paper collars or other articles to be dried are exposed to a uniform heat, while the remaining parts are not exposed to heat.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of two or more sections, *A A'*, of a heating-drum, with a tubular shaft, *B*, having compartments *b c*, which communicate with the hollow rims of the sections *A A'*, and with the pipes *C D*, substantially in the manner set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of March, 1876.

EDGAR CARY. [L. s.]

Witnesses:

W. HAUFF,

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