(No Model.)

H. P. REED & P. L. WINCHESTER, Jr.

METHOD OF STUFFING LEATHER.

No. 245,975. Patented Aug. 23, 1881.

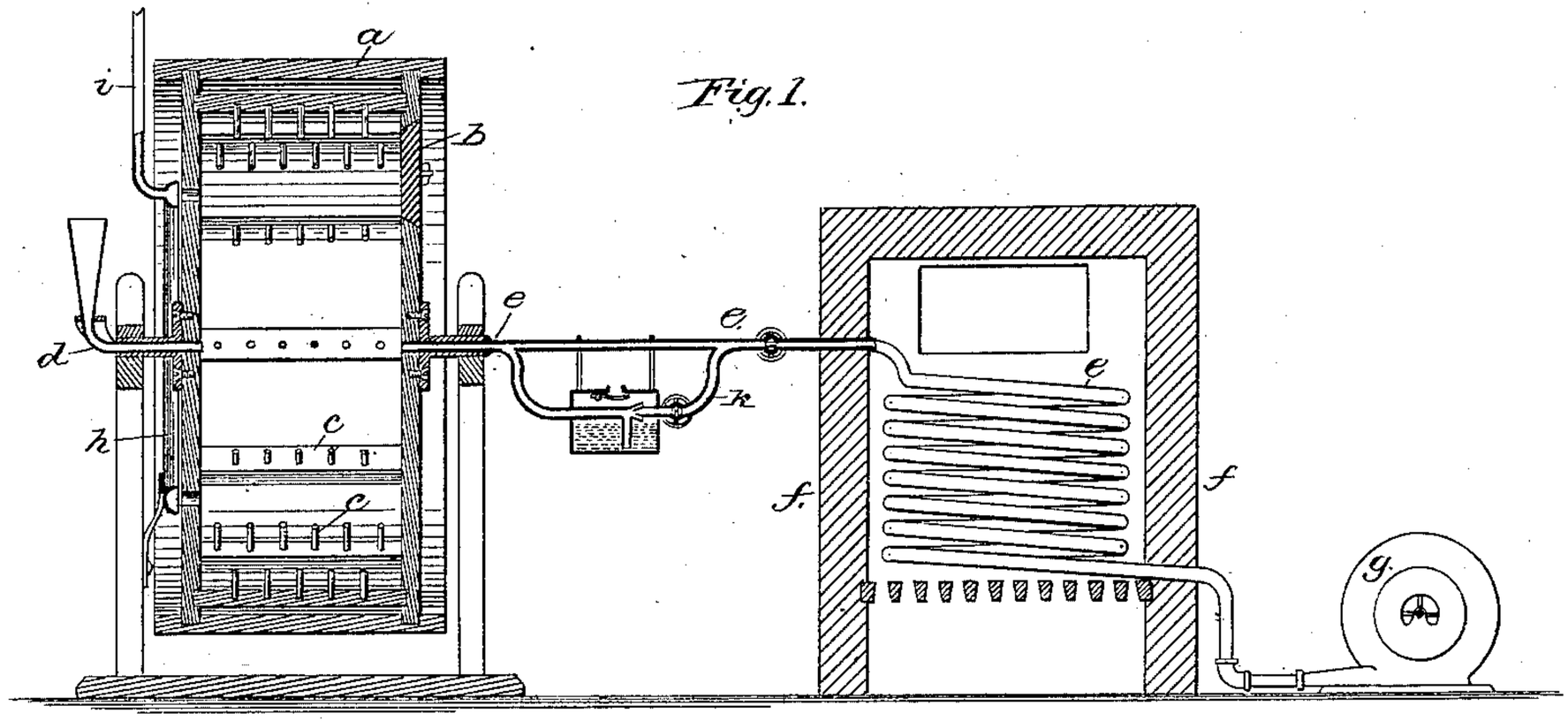

Fig. 1.

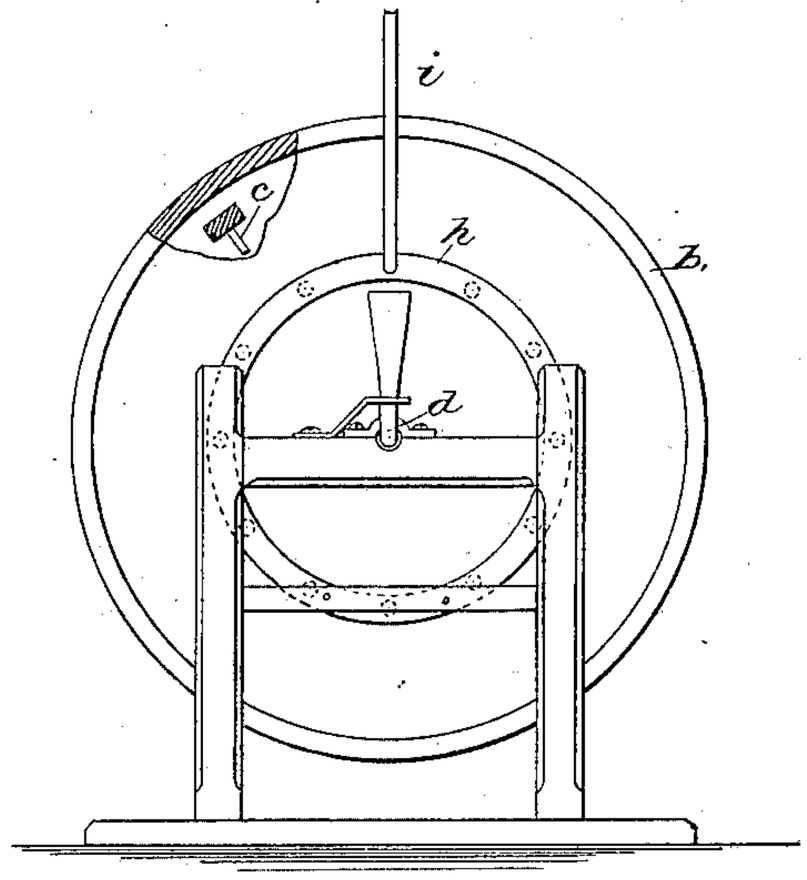

Fig. 2.

Witnesses.
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Inventors
Herbert P Reed, and
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by Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

HERBERT P. REED AND PEREZ L. WINCHESTER, JR., OF PEABODY, MASS.

METHOD OF STUFFING LEATHER.

SPECIFICATION forming part of Letters Patent No. 245,975, dated August 23, 1881.

Application filed April 30, 1881. (No model.)

To all whom it may concern:

Be it known that we, HERBERT P. REED and PEREZ L. WINCHESTER, Jr., of Peabody, county of Essex, State of Massachusetts, have invented a new and useful Improvement in Methods of Stuffing Leather, of which the following description, in connection with the accompanying drawings, is a specification.

This invention in stuffing leather has for its object a novel method whereby the grease may be put into the leather more uniformly than heretofore. The leather must be warm, and be kept warm uniformly during the time the grease is being applied to it.

The leather to receive grease or stuffing is now placed in a rotating drum or wheel previously heated by steam or hot air blown into it while the wheel is empty, for it has been found that steam injected into the drum in the presence of the leather is apt to burn it. A drum heated only before placing the leather in it commences to cool immediately thereafter, and the stuffing or greasing operation is retarded. Another serious objection to the direct introduction of steam into the drum with the leather and grease is that arising from water of condensation, as even a small amount of water added at that time, the leather having been evenly and sufficiently moistened before it was placed in the drum, will be taken up by the leather, thus lessening the amount of grease entering the leather at that spot where the water of condensation in the grease meets the leather, and, further, the heat derived from free steam varies materially, according to the pressure of steam in the boiler. To obviate the objection of free steam the drum has been placed in a second drum heated by steam.

In this our invention we keep the interior of the drum and leather therein at the desired temperature by means of heated air forced therein while the drum containing its charge of leather is being rotated. The hot air is supplied to the drum by a blower or pump through pipes, in connection with a receiving-chamber of a suitable heat-generating apparatus.

Figure 1 represents, in vertical section, an apparatus embodying our invention, the wall of the heat-generating apparatus being also in section. Fig. 2 is an elevation of the left-hand end of the drum, the latter being partially broken out.

The drum *a*, about seven feet in diameter, has a door, *b*, for the introduction of the leather therein, and a series of pegs, *c*, at suitable intervals apart to lift and tumble the leather as the drum is rotated, all as usual. This drum has at one journal a pipe, *d*, for the introduction at suitable times of hot grease, and at its other journal it has a pipe, *e*, for the continuous admission of hot air while the drum is being rotated with the leather and grease therein. The pipe *e* will preferably be placed, in coil or other form, in the combustion-chamber *f*, heated in any usual way, so that air forced through the said pipe by an air-forcing apparatus, *g*, (shown as a blower, but which might be a pump,) will be heated before reaching the drum. The side of the drum will be provided with openings of suitable size for the escape of the heated air, so as to maintain proper circulation. The air so escaping might be delivered into an annular chamber, *h*, placed next the openings of the wheel, (see Fig. 1,) having a pipe, *i*, to lead the air out of the building, if desired.

The air-pipe, at a point between the chamber *f* and drum, may have a branch, *k*, by which, if desired, to divert the heated air into a water-box and over a pan of water, to thus add a little moisture to the hot air, if too dry; or we may inject a small amount of steam into the pipe *e* containing the hot air, to slightly moisten it, care being taken to so regulate the steam that no water of condensation is permitted to form or enter the drum.

In this our process, and by our application, we are enabled to keep the interior of the drum and the leather therein at a uniform temperature, which may be indicated by a thermometer properly connected with the drum, which enables us to grease or stuff the leather uniformly and rapidly, and that without fear of injuring the leather in any way by overheating, as when steam is depended upon, or by too rapid cooling, as when the drum is heated only before applying the leather. The grease, in proper quantities, will be introduced from time to time, as needed.

We claim—

1. That improvement in the art or method

of stuffing or greasing leather which consists in subjecting the leather in a revolving drum, in the presence of grease, to the action of a current of heated air introduced into the axis of the said rotating drum during the stuffing operation, thereby maintaining a uniform temperature in the drum, substantially as and for the purpose described.

2. The rotating drum and its pegs or projections to act upon the leather, and pipes located at the axis of rotation of the said drum to introduce both hot air and grease, combined with a hot-air generator and air-forcing apparatus to force the hot air into the drum during its rotation and keep the leather and grease warm during the stuffing operation, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HERBERT P. REED.
PEREZ L. WINCHESTER, JR.

Witnesses:
GEO. HOLMAN,
FRANK E. FARNHAM.