

E. D. Murphy,

Journal.

No. 109,237.

Patented Nov. 15, 1870.

FIG. 1.

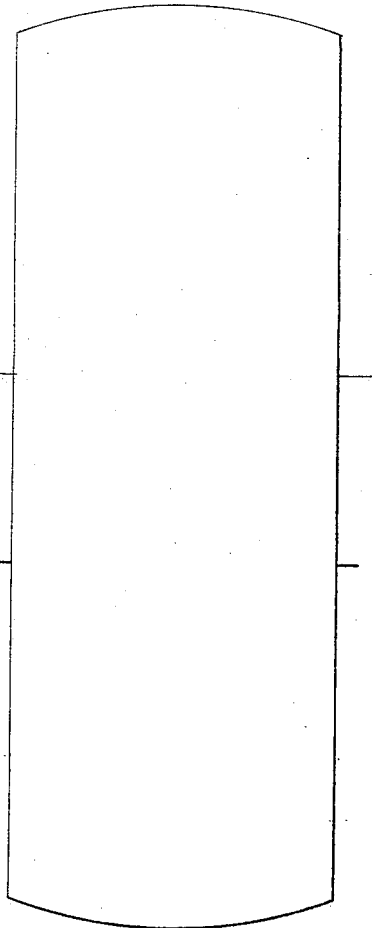
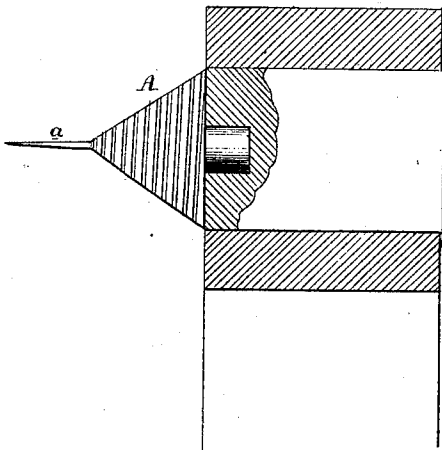
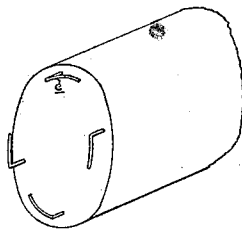


FIG. 2.



WITNESSES.

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United States Patent Office.

ELIZA D. MURFEY, OF NEW YORK, N. Y., ASSIGNOR TO THE MANHATTAN
PACKING MANUFACTURING COMPANY, OF SAME PLACE.

Letters Patent No. 109,237, dated November 15, 1870.

IMPROVEMENT IN THE MODE OF PREVENTING THE HEATING OF AXLES OR JOURNALS.

The Schedule referred to in these Letters Patent and making part of the same.

I, ELIZA D. MURFEY, of New York, county of New York, State of New York, have invented a Mode of Preventing the Heating of Shafts, Journals, Crank-Pins, &c., of which the following is a specification.

Nature and Object of the Invention.

My invention consists in providing a journal, crank-pin, or shaft with one or more pointed projections, arranged as fully described hereafter, so as to prevent the undue heating of the pin or journal, and of the bearing in which it turns.

Description of the Accompanying Drawing.

Figure 1 represents sufficient of a driving-shaft with its pulley and bearing to illustrate my improvement; and

Figure 2 is a perspective view of part of a crank-pin, showing a modification.

General Description.

The heating of journals, crank-pins, and their boxes is a source of inconvenience and loss, which it is the object of my invention to obviate.

To accomplish this result I provide the journal or shaft with one or more pointed projections, the application of which, as practical tests have shown, prevents the excessive heating of the journals and their bearings.

The said projections may be arranged in various ways; for instance, pointed pins may be secured at equal distances apart on the shaft, so as to extend radially from the same, or pointed pins, all curved or

bent in the same direction, may be secured to the end of the journal, as shown in fig. 2, or the end of the shaft may be tapered or conical, but in practice I have found that a most satisfactory result is produced by fitting to the end of the pin or shaft a detachable metallic cone, A, fig. 1, having a spiral groove on the outside, and a projecting needle, *a*, at its apex.

By actual experiment, with a shaft carrying-wheel four feet in diameter, driven by a nine-inch belt, and turning four hundred and eighty (480) revolutions a minute, I have found that when provided with a pointed projection or projections, as described, the journal would not become unduly heated, but that, on the removal of the said projection, all the other conditions being the same, the heat of the bearing would increase to such a degree the water would boil when poured upon it.

Inasmuch as any desired number of pointed projections may be used, and as the arrangement of the same on the journal or shaft will not affect the result, I do not limit myself to any special number or arrangement of pointed projections; but

I claim—

A shaft or journal provided with a detachable metal cone, or with one or more pointed projections, substantially as and for the purpose described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

ELIZA D. MURFEY.

CHARLES E. FOSTER,
ALBERT H. NORRIS.