W. J. KEEP.

MELTING CUPOLA FOR METAL.

APPLICATION FILED NOV. 10, 1905.

929,598.

Patented July 27, 1909.

2 SHEETS—SHEET 1.

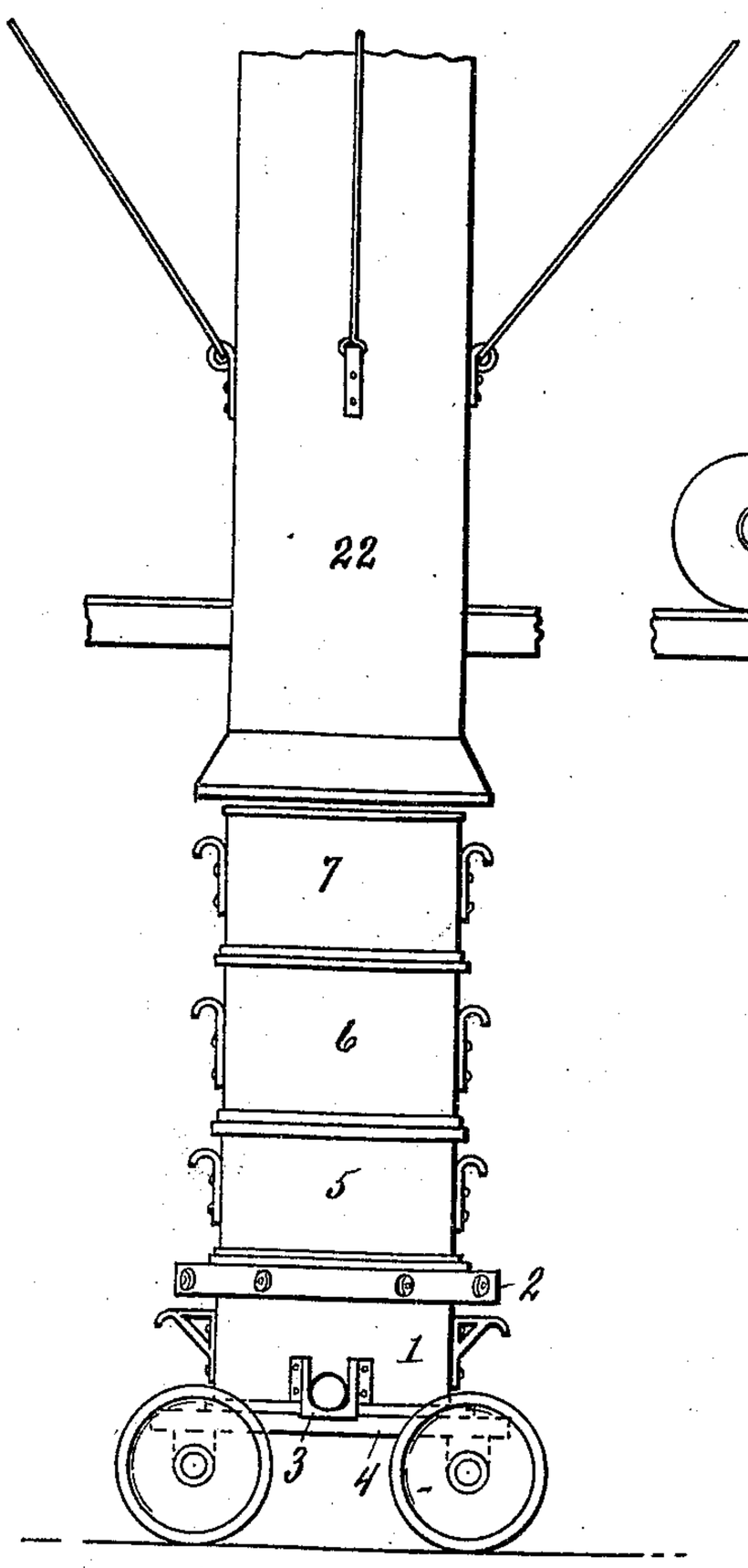

Fig. 1.

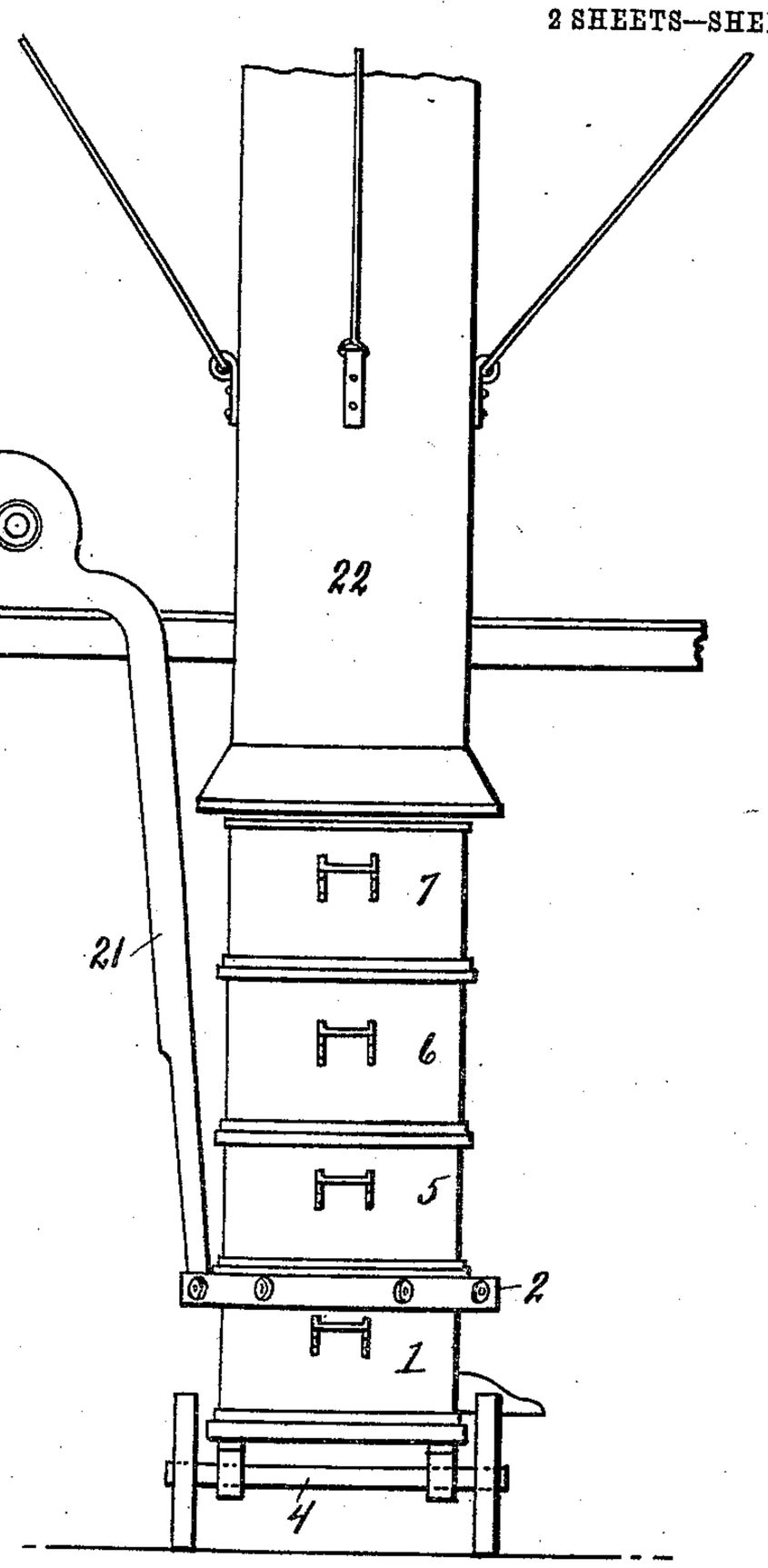

Fig. 2.

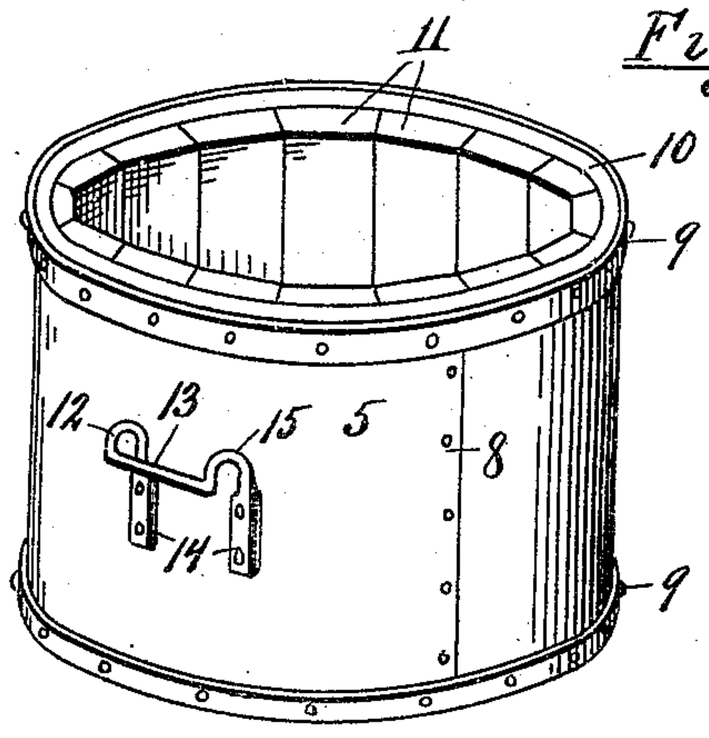

Fig. 3.

Witnesses.
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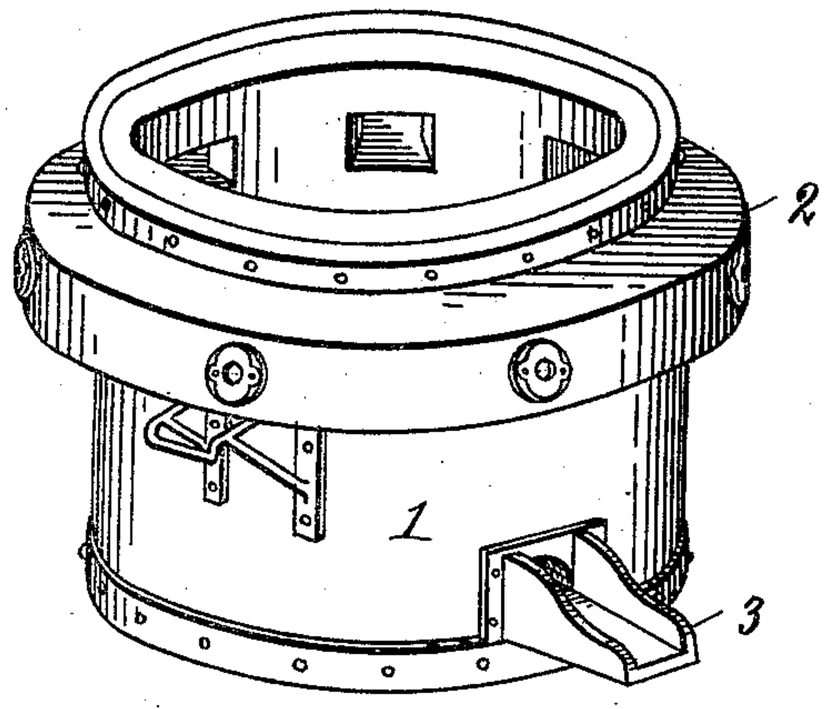

Fig. 4.

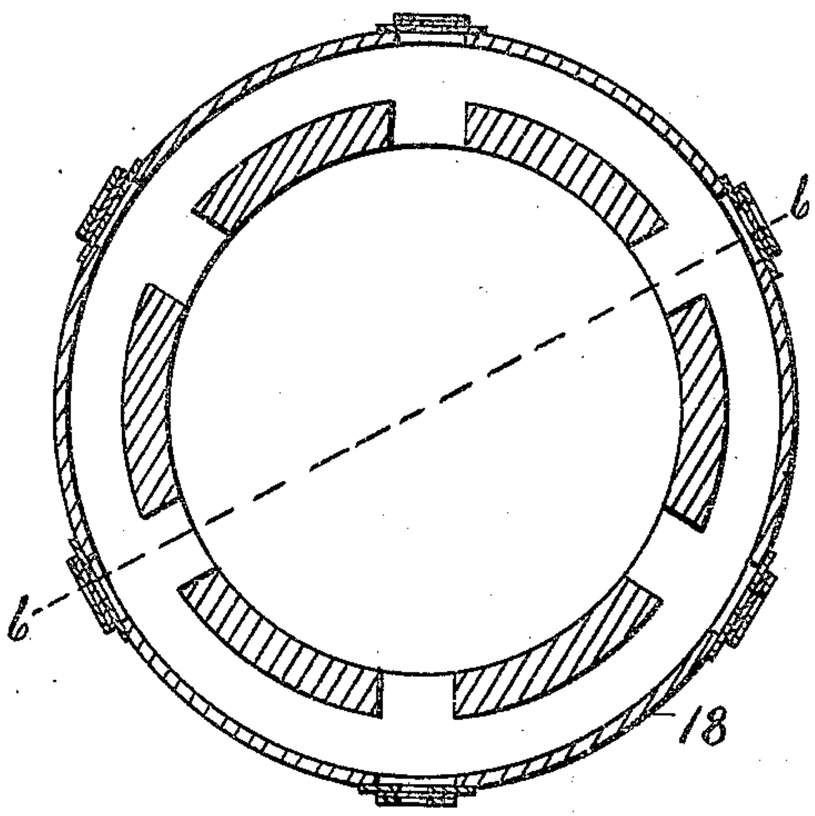

Fig. 5.

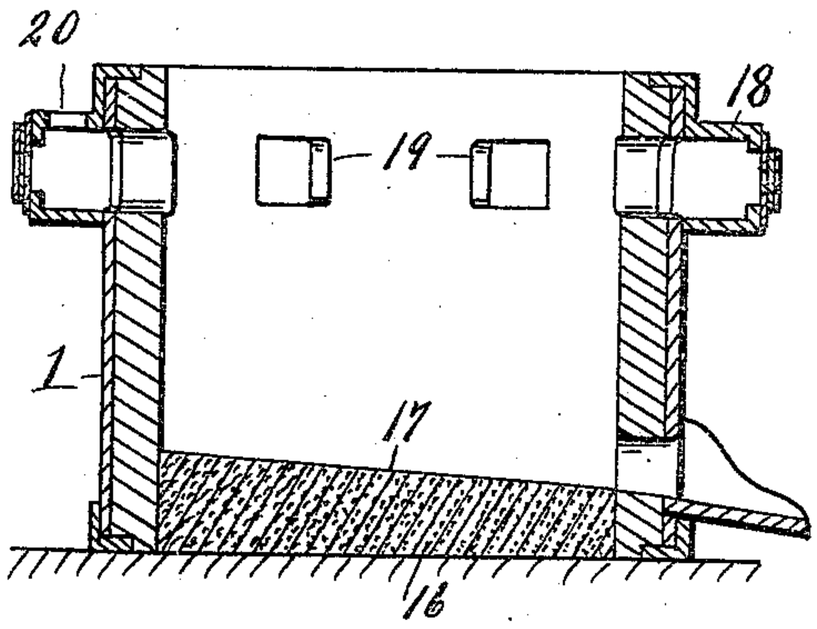

Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM J. KEEP, OF DETROIT, MICHIGAN.

MELTING-CUPOLA FOR METAL.

No. 929,598. Specification of Letters Patent. Patented July 27, 1909.

Application filed November 10, 1905. Serial No. 286,634.

To all whom it may concern:

Be it known that I, WILLIAM J. KEEP, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Melting-Cupolas for Metal, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to melting cupolas for metal; it has for its object an improved form of portable cupola made in sections, in which the several sections above the bottom section are interchangeable and may be easily removed and relined or re-arranged or cleaned.

In the drawings:—Figure 1, is a side elevation. Fig. 2, is a front elevation. Fig. 3, is a perspective of a section. Fig. 4, is a perspective of the bottom section. Fig. 5, is a horizontal section through the wind box of the bottom section. Fig. 6, is a vertical section through the bottom section.

The bottom section 1, with which is connected the wind box 2, and spout 3, is mounted on a truck 4. Above the bottom section are several independent or removable sections 5, 6 and 7. Each of the removable sections consists of a case of sheet metal 8 with hoops 9, riveted to the ends; each hoop has an inturned flange 10, that engages over the included lining brick 11, and aids in holding the lining brick in place. The lining brick 11, are of regular form and are easily and conveniently put into place and hold themselves securely. Each section is provided with two handles 12, 13, riveted (by footings 14) to the case, and provided with a hand bar 13. The hand bar 13, hangs out from the foot pieces 14, of the handle with which it is connected by goosenecks 15, that curve out and afford means for engaging with a bar that can be used to carry the sections if it be required to carry them when they are heated.

The bottom section 1, rests on the truck platform or on a bed-plate which is protected by a bed of sand 17. Around the top of the bottom section is an annular wind box 18, and through the walls of the section are a number of twyers 19, through which the air passes from the wind box to the interior of the cupola. The lower end of section 1, is made with a hoop and inturned edge the same as the other sections and is open so that the contents may be knocked out after a heat. The sand prevents the bed-plate from melting, also brings the bottom on a level with the hole in the spout to allow the iron to run out. The sections are assembled by stacking them in vertical order, and openings between the lining brick at the junction of two sections filled with clay; this is easily broken when it is again necessary to take the cupola apart. Through the outer wall of the wind box, opposite each twyer is a plug in which is inserted a transparent medium to furnish a peep hole through any one of the twyers. Into the top of the wind box, external to the casing is an inlet opening 20 for the insertion of the spout of the air duct 21. A smoke stack or fume stack 22, suspended from any suitable support or the roof of the building in which the cupola is used is properly located to allow the truck 4, with its assembled sections mounted thereon to be run under the stack. The bottom of the smoke stack is expanded to bell mouth shape and may be used to ventilate the room in which the stack is located.

What I claim is:—

1. A melting cupola, having in combination a suspended fume stack, a base section, a truck supporting said base section, a plurality of interchangeable sections adapted to be assembled by stacking in vertical order interposed between said fume section and said base section and supported on said base section, substantially as described.

2. A melting cupola, having in combination a fume stack, a base section, a plurality of interchangeable brick-lined metallic shell sections adapted to be assembled by stacking in vertical order interposed between said

base section and said fume stack, and a truck arranged to support the interchangeable sections, substantially as described.

3. A melting cupola, having in combination a suspended fume stack and a suspended blast pipe, a base section, a truck supporting said base section, a plurality of interchangeable sections adapted to be assembled by stacking in vertical order, interposed between said base section and said fume stack, and supported on said base section, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

WILLIAM J. KEEP.

Witnesses:

STEPHEN J. MADDEN,

GEO. L. RENO.