Aug. 23, 1932. A. H. MOON 1,873,780

PACKAGE AND METHOD FOR THE SHIPMENT OF METAL PIECES

Filed Oct. 28, 1930 2 Sheets-Sheet 1

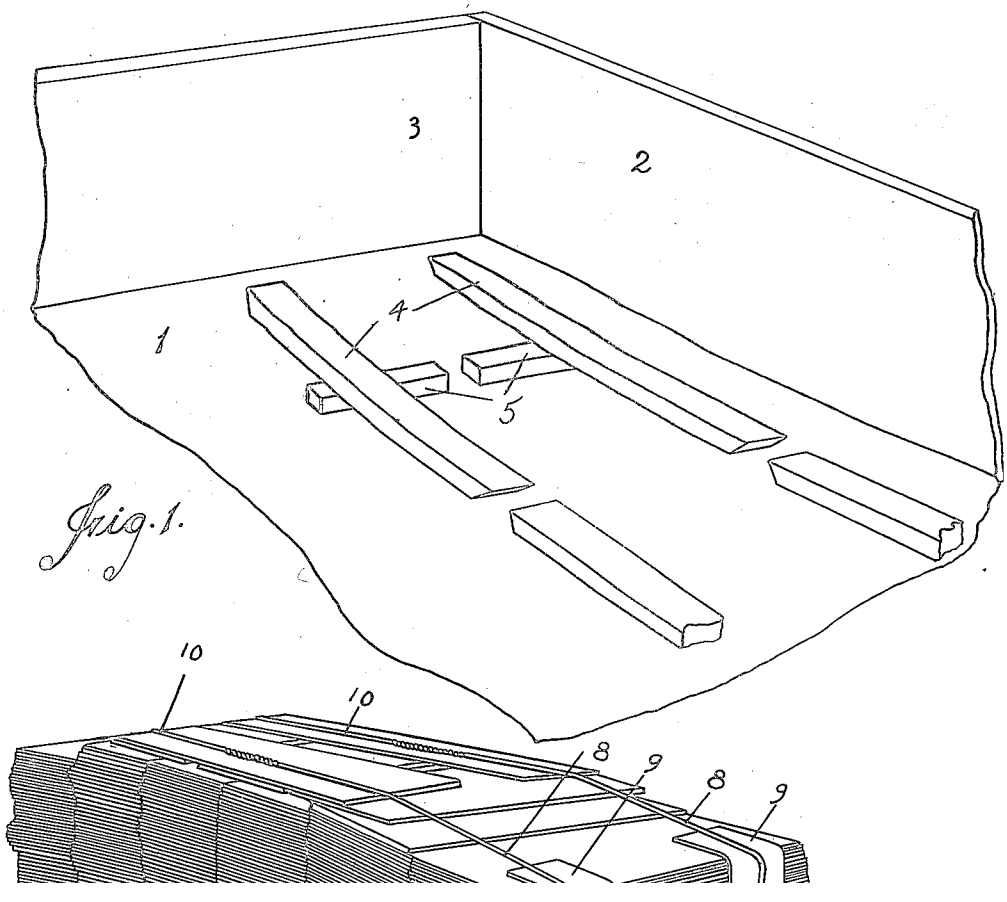


Fig. 1.

Patented Aug. 23, 1932 1,873,780

UNITED STATES PATENT OFFICE

ALVA H. MOON, OF MIDDLETOWN, OHIO, ASSIGNOR TO THE AMERICAN ROLLING MILL COMPANY, OF MIDDLETOWN, OHIO, A CORPORATION OF OHIO

PACKAGE AND METHOD FOR THE SHIPMENT OF METAL PIECES

Application filed October 28, 1930. Serial No. 491,761.

The primary object of my invention is the production of packages of metal pieces such as sheets, plates, sheet bars and the like, having the advantages of known methods of shipment, with additional advantages as hereinafter set forth. It has been the practice to bind together metal pieces of the kind set forth into unitary packages of considerable weight, which packages are held together by suitable means such as bands or wires passing thereabout, and it has also been the practice to support such packages so that under the movements of a vehicle such as a railroad car used in transporting them, they may shift relative to the vehicle floor. A disadvantage which has been noted in the shipment of packages of considerable length, is that the longitudinal tying members are in tight engagement with the package primarily at the ends thereof, while, when the center of the package sets, the tension upon said tying members or bands is longitudinal and parallel with the top of the package, and there is no such pressure engagement between the said tying members and the metal pieces or portions of metal pieces immediately beneath, as obtained at the ends. Thus, particularly in the shipment of metal pieces smaller in total length than the length of the package, there has been noted a tendency for the release and side slippage of pieces within the center of the package. My invention therefore has particular usefulness in the shipment of such metal pieces as sheet bars and the like, and it is also useful in the shipment of metal sheets, as will hereinafter be set forth. An object of my invention is the provision of means whereby the settling of the load tends to tighten rather than to loosen the bands or tying members which hold the load together, and a concurrent object of my invention is the provision of means whereby the engagement of the bands with the metal pieces may be made tighter after the assembly of the package by a control of the configuration thereof. Still another object of my invention is the provision of means whereby encircling bands may be caused more tightly to engage the metal pieces or portions of metal pieces at the center of the package.

These and other objects of my invention which will be set forth hereinafter or will be apparent to one skilled in the art upon reading these specifications, I accomplish by that certain method of assembly and by that construction and arrangement of parts of which I shall now describe exemplary embodiments having to do with the shipments of sheets and/or sheet bars, it being understood that my invention is not restricted to the shipment of these specific metal pieces, and that modifications may be made in the construction of said exemplary embodiments without departing from the spirit of my invention. Reference is made to the drawings which form a part of these specifications.

In the drawings:

Figure 1 is a perspective view of a portion of a gondola car, showing an arrangement of supporting members suitable for the practice of my invention.

Figure 2 is a perspective view of a package of sheet bars ready for shipment.

Figure 3 is a perspective view of a portion of a box car showing an assembly of supporting members and tying members suitable for the shipment of sheets.

Figure 4 is a perspective view of the bundle of sheets embodying my invention.

In the practice of my invention, I accomplish the objects hereinabove set forth essentially by binding up a bundle of metal pieces and then producing an artificial configuration in said bundle adapted to tighten the bands. I have found that I may do this by humping up the bundle in its central portions, or by allowing the ends to sag somewhat relative to the central portions, whereby a configuration of the bundle is produced which is substantially convex upwardly. Such a convexity of the bundle obviously tends to increase the tension of the band portions lying above the bundle, while the supporting structure whereby the said convexity is produced, supports the bands from beneath and prevents a concurrent loosening of the end portions of the bands. In many instances it is advantageous to bind

employed with central supporting members instead of the cross pieces 5 or 5*a*. The specific construction of bundles shown is also not a limitation of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A package of metal pieces having longitudinal binding means passing about the said pieces whereby they are held in relationship in said package, and means for supporting the central portion of said package while permitting the ends thereof to sag with reference to said central portion, said means passing beneath said longitudinal binding means.

2. A package for the shipment of metal pieces comprising a plurality of metal pieces forming a package held together by longitudinal encircling binding means, longitudinal supporting members upon which said bundle rests, and transverse supporting means beneath the central portion only of said longitudinal supporting means.

3. A package for the shipment of metal pieces comprising a stacked assembly of metal pieces having longitudinal and transverse encircling binding means, supporting means upon which said package rests, said supporting means being free to move with respect to a floor, and transverse supporting means beneath a portion of said first mentioned supporting means whereby another portion is permitted to sag under the weight of said package.

4. A package of metal pieces comprising a stacked assembly of said pieces tied into package form by encircling binding means, and supporting means for said package comprising longitudinal bendable skids, and transverse supporting means beneath the center only of said skids.

5. A process of preparing metal pieces for shipment which comprises providing a plurality of longitudinal flexible skid members, supporting said skid members with permanent supports at the center thereof with temporary supports at the ends thereof, surmounting said skids with a package comprising an assembly of metal pieces bound together with encircling binding means, and then removing said temporary supports whereby said package is permitted to sag.

6. A package of metal pieces having longitudinal binding means and supporting means engaged therewith, and a plurality of metal pieces arranged transversely upon said supporting means, said binding means encircling said pieces, and means for supporting said supporting means centrally beneath, whereby said package including said binding means above and below, and said supporting means are distorted longitudinally.

7. A package of metal pieces having longitudinal binding means and supporting means engaged therewith, and a plurality of metal pieces in separate adjacent piles arranged transversely upon said supporting means, said binding means encircling said pieces, and means for producing in said package, said binding means above and below, and said supporting means a substantially arcuate distortion whereby said piles are relatively displaced.

ALVA H. MOON.

Aug. 23, 1932. H. NIGHTINGALE 1,873,781

LIQUID FUEL BURNER AND VARIABLE SUPPLY MEANS THEREFOR

Filed Jan. 17, 1931

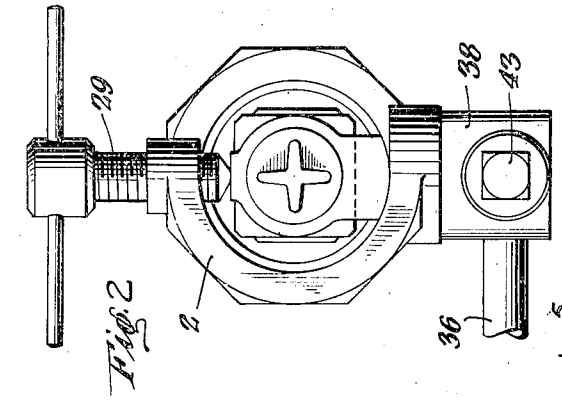


Fig. 2

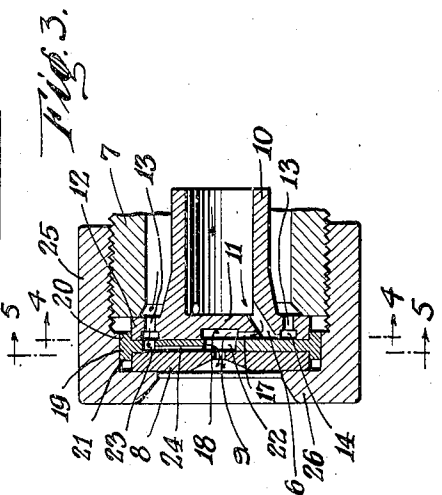
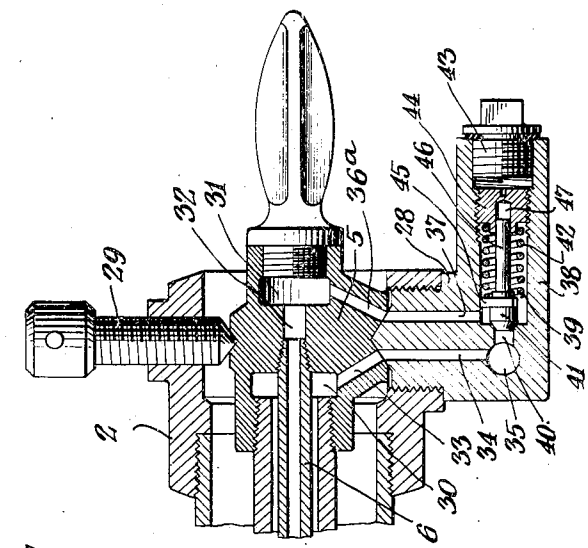


Fig. 3



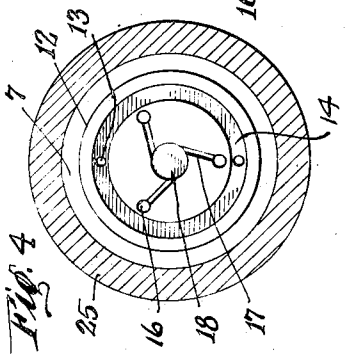


Fig. 4

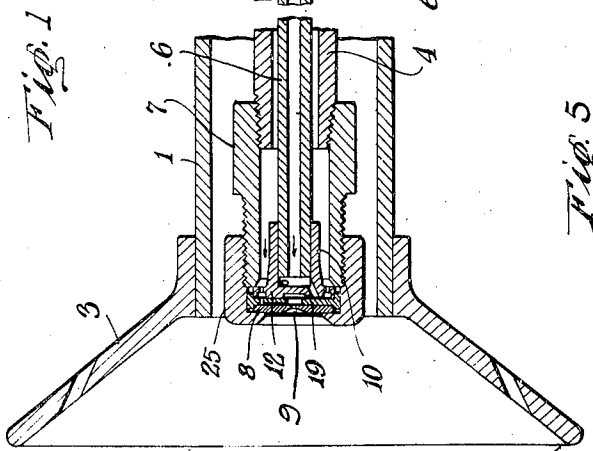


Fig. 1

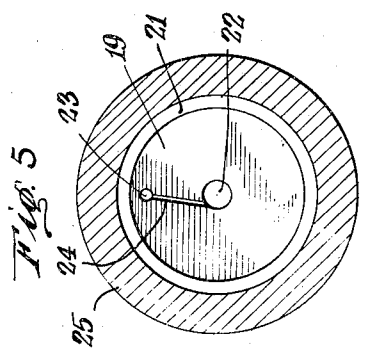


Fig. 5

Inventor

Harry Nightingale

By his Attorney

Frederick W. Barker