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E. J. HAYMAN

1,827,722

STOVEPIPE

Filed Feb. 15, 1927

Fig. 1.

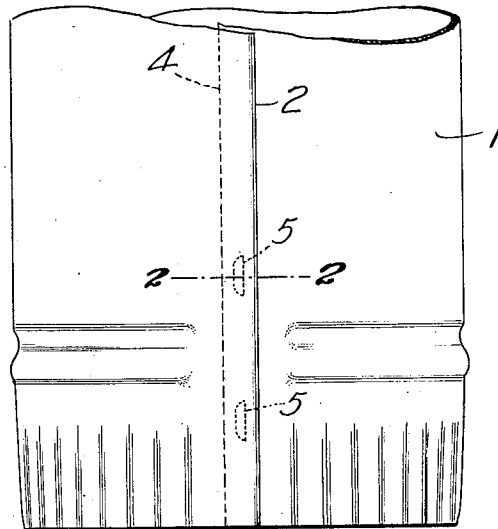


Fig. 2.

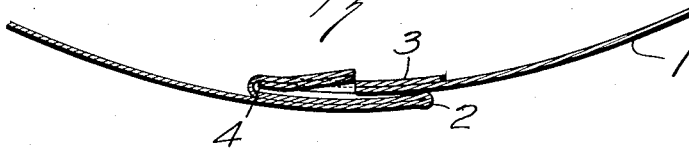
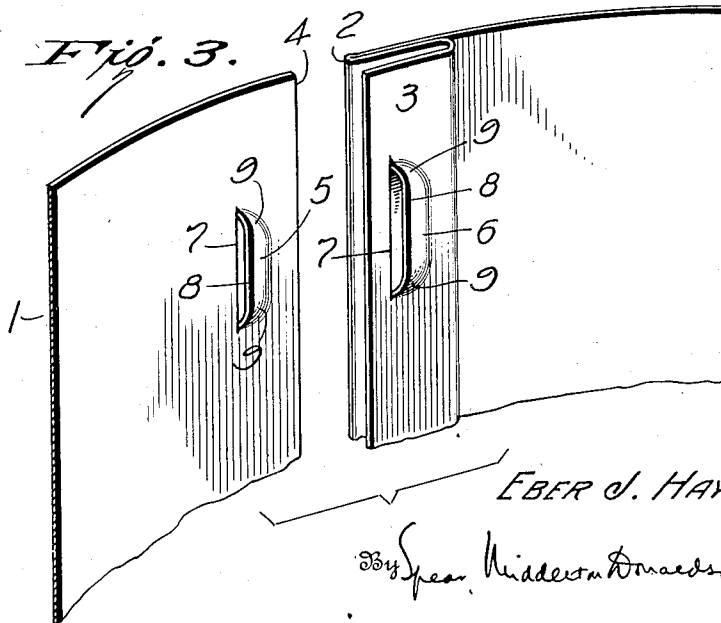


Fig. 3.



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STOVEPIPE

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My present invention relates to a stovepipe or similar structure made from sheet material, provided with a seam capable of being locked and unlocked so that in the case of a stovepipe, lengths of pipe may be readily nested for shipment and quickly and efficiently locked into tubular form when desired.

Important objects of the invention consist in providing a lock for the edge portions of such structures which may be readily separated when desired but which in the case of a stovepipe, will be smoke tight while in use, which cannot be accidentally separated, which will not be wasteful in material, and which can be readily and cheaply manufactured.

Other objects will appear as the description proceeds and with reference to the accompanying drawings, in which:

Fig. 1 is a view of a pipe section embodying my invention.

Fig. 2 is a sectional view along the line 2-2 of Fig. 1.

Fig. 3 is a detailed perspective view of the lock.

In the embodiment illustrated, I have shown a pipe generally at 1 having one longitudinal edge portion bent back upon itself so as to produce a fold 2 and a separated thickness of material 3. Within this cavity or channel thus formed, the opposite longitudinal edge portion 4 of the pipe is adapted to be enclosed.

In order to securely lock the two edge portions together, I provide offset locks shown at 5 and at 6 in the thickness 3 between the raw and folded edges thereof. The stamped out portions 6 are obviously produced before the fold 2 is made.

It is essential to an efficient lock, that these offset locks be made in a direction toward the longitudinal axis of the pipe or structure. In addition, it is highly desirable that the fold be made on the seam or inside of the structure, so that a smooth exterior is presented and for other purposes.

Offset locks in each edge portion are similarly located.

It will be seen that in the offsetting opera-

tion, a raw or sharp edge 7 is produced and an offset portion 8 having gently sloping shoulders 9.

When the edge portion 4 is slipped between fold 2 and the thickness 3, the offset lock 5 in the edge portion 4 forces the fold 2 and thickness 3 apart until the lock 5 springs into the lock 6. When the parts assume these positions they cannot be separated laterally because of the inherent spring of the thickness 3 and fold 2. They cannot be pulled directly apart because the raw edges of each lock engage each other.

Due to the sloping shoulders 9 however, a slight tap of one edge of the pipe in a longitudinal direction will cause one lock to ride out of its fellow and the two edge portions may then be pulled directly apart.

It is to be noted that when the edge portions are locked, the thickness 3 being on the inside of the pipe, upon further flexing toward the longitudinal axis, each offset lock tends to more completely enter its fellow. This makes accidental separation impossible.

In a locked pipe of this type it is imperative that the diameter or circumference thereof be accurate. It therefore follows that should it be found after manufacture that an error in size had been made, the pipe must be capable of adjustment rather than to discard the section. If such is the case with the pipe of this invention, a mere refolding will accomplish the desired end without in any manner disturbing the locks.

It will be seen that there is no waste material in the pipe herein described, that by simple operations, a rigid, efficient lock is secured, but which may be readily separated when desired. This is sometimes of paramount importance such as when part of the equipment of tourists, campers or the like.

In the claims where I refer to an edge portion, I intend such expression to cover that part of the structure lying adjacent the actual edge thereof.

From the description and drawings it will be apparent that the raw edge 7 of lock 6 is engaged by the offset lock 5. Therefore, in the claims where I refer to the lock 6, I intend this expression to include this essential

raw edge 7. So that when I say "engaging each other", I intend it to cover the circumstance where the offset lock 5 engages the raw edge 7 of the lock 6, which edge is in fact a part of said lock.

What I claim is:

1. A pipe section comprising a sheet of metal, one longitudinal edge portion thereof being bent upon itself to form an enclosing channel, and adapted to receive the other longitudinal edge portion therein, similarly placed offset locks in each edge portion adapted to engage each other.

2. A pipe section comprising a sheet of metal, one longitudinal edge portion thereof being bent upon itself to form three thicknesses of material, two of which are on the longitudinal axis side of the pipe, an offset lock in the innermost thickness of material, the other longitudinal edge portion of the section being held between two thicknesses of the first mentioned edge portion, and provided with a similar offset lock engaging the first mentioned offset lock.

3. A pipe section comprising a sheet of metal, one longitudinal edge portion thereof being bent upon itself to form three thicknesses of material, an offset lock in one thickness forming a raw edge, the opposite longitudinal edge portion of said section being enclosed between two thicknesses of the first mentioned edge portion, and a similar offset lock in said edge portion engageable with the raw edge of the first mentioned punched out lock.

4. A pipe section comprising a sheet of metal, one longitudinal edge portion thereof being bent upon itself to form three thicknesses of material, the opposite longitudinal edge portion being enclosed between two of said thicknesses, offset locks on one edge portion engaging similarly shaped and positioned offset locks in the other edge portion, said locks having gently sloping end shoulders.

5. A lock of the character described, comprising a tubular structure having an edge portion doubled upon itself to form three thicknesses of material, an offset lock projecting beyond the surface of the doubled over portion and inwardly toward the axis of the tubular object, and similarly placed similarly shaped offset lock in a cooperating edge portion of the tubular object seated in the first mentioned punched out lock.

6. A lock of the character described comprising a tubular structure doubled upon itself to form three thicknesses of material two of which are on the axis side of the tube, the innermost thickness of the doubled portion having a raw and a folded edge, a cut in said portion between said edges forming a raw locking edge, said tubular structure having a cooperating edge portion adapted to lie and be enclosed between the doubled

thicknesses, so that the innermost thickness of the doubled portion lies on the axis side of the cooperating edge portion and an offset lock in said edge portion projecting toward the tubular axis, said lock projecting through the innermost thickness of the doubled portion engaging the raw locking edge and preventing separation of the parts.

7. A lock of the character described comprising a closed sheet metal structure, one edge portion of said sheet being doubled back and forth on itself to form three thicknesses of material two of which are on the inside of said structure, a lock between the edges of the innermost fold, said structure having a cooperating edge portion adapted to lie and be enclosed between the doubled thicknesses, a lock in the cooperating edge portion projecting toward the inside of the structure, said lock projecting through the innermost fold and engaging the first mentioned lock to prevent separation of the structure edge portions.

8. A pipe section of sheet metal, one longitudinal edge portion being bent upon itself inwardly of the pipe to form an inner layer and an intermediate layer connecting the inner layer with the outer layer, said inner layer having an opening therein, and the other longitudinal edge portion of the pipe lying between the inner and intermediate layers and having an offset lock upset therefrom back from its extreme edge leaving the latter intact, said lock projecting through said opening engaging with its raw edge the raw edge of the opening in the inner layer, substantially as described.

9. A pipe section according to claim 8 in which an offset wall is provided covering the opening in the inner layer and covering also the offset lock first mentioned.

10. A pipe section according to claim 8 in which the offset lock has its raw edge so disposed as to extend at an angle across the raw edge of the opening with which it engages.

11. A pipe section according to claim 8 in which the offset lock has its end portions at an inclination to the sheet material, so that by a relative movement of the lock lengthwise of the joint separation of the lock from the opening can be effected.

In testimony whereof, I affix my signature.
EBER J. HAYMAN.

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