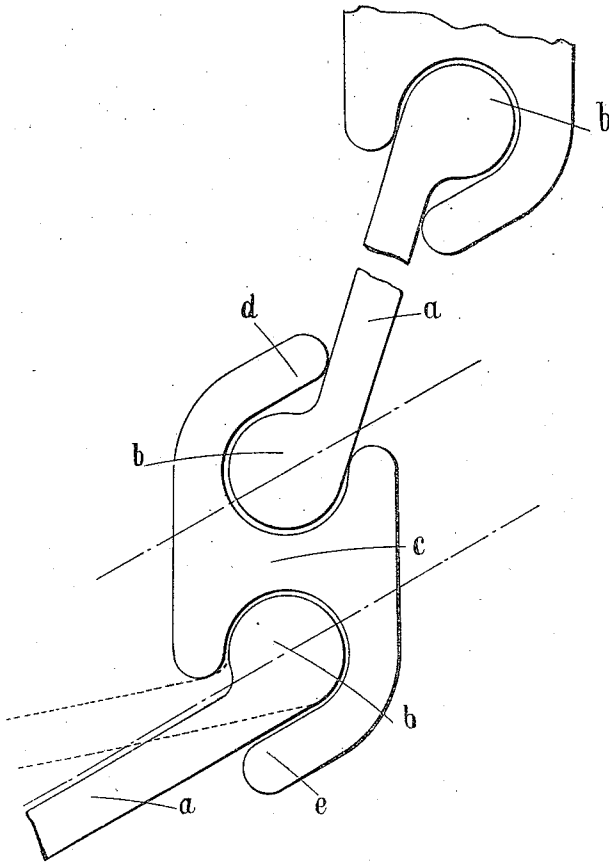


J. R. WEBB AND H. G. G. BLAKEMORE.
METALLIC SHEETING AND LOCKING BAR.
APPLICATION FILED JUNE 12, 1922.

1,431,274.

Patented Oct. 10, 1922.



INVENTORS:

J. R. Webb &

H. G. G. Blakemore

By

Lawrence Langner
Att'y.

UNITED STATES PATENT OFFICE.

JOHN RACKER WEBB AND HENRY GEORGE GRANVILLE BLAKEMORE, OF LONDON, ENGLAND, ASSIGNORS TO RANSOME MACHINERY COMPANY (1920) LIMITED, OF LONDON, ENGLAND, A COMPANY OF GREAT BRITAIN.

METALLIC SHEETING AND LOCKING BAR.

Original application filed April 4, 1922, Serial No. 549,472. Divided and this application filed June 12, 1922. Serial No. 567,863.

To all whom it may concern:

Be it known that we, JOHN RACKER WEBB and HENRY GEORGE GRANVILLE BLAKEMORE, subjects of the King of Great Britain, residing at London, England, have invented new and useful Improvements Relating to Metallic Sheeting and Locking Bars (for which we have filed application No. 8,626 in Great Britain on March 19, 1921), of which the following is a specification.

This invention has reference to metallic sheeting and locking clutch bars such as are employed for the erection of temporary or permanent subaqueous retaining walls metallic sheet piling for coffer dams or as members either alone or in conjunction with concrete or the like for bridges, buildings and other structures.

In the following specification the nature of the invention will be described with reference to metallic sheet piling, but it is to be understood that the invention is applicable to metal sheets and locking clutch bars employed for constructional purposes generally.

Amongst the several objects we have in view are to provide an improved system of metallic sheeting and locking clutch bars whereby the several sheets may be interlocked one with the other which compared with the weight of metal employed shall be capable of resisting a considerable degree of lateral thrust from either side when the members are assembled and of resisting bending movements encountered in application to provide an interlock between the individual sheet members which while ensuring an approximately water-tight joint shall permit of considerable flexibility at the joints so that a wall of piling for example of curved formation and of comparatively small radius may be constructed.

A further object is to provide an interlock between the sheet piling members which shall prevent jamming at the joints due to imperfect alignment so that subsequent drawing of the piles will be facilitated for it is to be observed that one of the chief advantages of metallic sheet piling is its adaptability to repeated usage by being pulled and redriven after the work to be done though its temporary application is finished.

With the aforesaid objects in view and such others as may hereinafter appear or are incidental thereto our invention in its broadest aspect may be said to be embodied in a metallic sheet of trough corrugated or substantial S shape section the longitudinal edges of which are provided with an approximately cylindrical and preferably tangentially disposed bead and independent locking bar or clutch member having two approximately cylindrical recesses adapted to receive the cylindrical beads of adjacent sheets in such a manner as to permit of limited rotation of one sheet relatively to another around a vertical axis passing through the joint and more considerable angular changes by the possibility of threading the clutch members on the pile in the reverse direction to its normal direction.

According to the present invention the metallic sheet is trough or channel shape in cross section and is formed during the usual process of rolling with approximately cylindrical beads upon its longitudinal edges. The locking bar or clutch member whereby adjoining or juxtaposed sheets are connected together is formed from an approximately H shaped bar the upper left hand vertical limb and the lower right hand vertical limb being elongated and these elongated portions bent inwards to form two approximately cylindrical recesses or grooves adapted to receive the beaded edges of the piling members.

The mouths of the recesses are smaller than the diameter of the cylindrical beads on the edges of the sheets but wider than the thickness of the metal sheet so that while the metal sheets when engaged with the clutch member will be securely interlocked therewith yet the sheets will be permitted to adjust their alignment with that of the clutch member through a certain amount of angular displacement. The mouths are formed on opposite sides of the clutch member in such a manner that the two centre-lines drawn through the centres of the cylindrical recesses and passing through the mouths parallel to the edges of the trough shaped metal sheets threaded into the clutch member in the normal manner will be parallel also to each other.

In order that the invention may be clearly understood reference will now be made to the accompanying drawing wherein a preferred construction is illustrated by way of example.

In the construction illustrated *a* are metallic sheets which may be of a trough or channel shape in cross section and are provided with beads *b* upon the longitudinal edges thereof. The beads *b* are of approximately cylindrical formation and are tangentially disposed and are preferably formed during the usual process of rolling.

To connect adjoining or juxtaposed sheets we employ a locking bar or clutch member *c* formed from an approximately H shaped bar. The upper left hand vertical limb *d* and the lower right hand vertical limb *e* are elongated and bent inwards to form two substantially cylindrical recesses to receive the beaded edges of the sheets *a*, the recesses being formed on opposite sides of the clutch member *c*.

With the clutch member constructed in this manner certain advantages may be obtained in the assembling of a wall of piling as it enables the trough shape sections to be arranged with the bottoms of alternate piles on opposite sides of a line passing through the joints while partial rotation around a vertical axis passing through the joints is permitted in both directions.

Metal sheets or piling members of trough corrugated or approximately S shape in section may be employed under this invention and considerable angular changes in direction of the wall of piling may be obtained by means of the combined flexibility of the joint and the feasibility of threading the clutch member on the pile in the reverse direction so that specially bent piles for corner work are dispensed with.

Referring to the drawing it will be seen that the pile in the lower recess of the clutch member *c* is threaded in the normal manner but that in the upper recess is threaded in the reverse to the normal. A considerable angular change of alignment is thus obtained.

What we claim is:—

1. Metallic sheeting and locking bars comprising a metallic sheet the longitudinal edges of which are provided with an approximately cylindrical bead and an independent locking member formed from an approximately H shaped bar the upper left hand vertical limb and the lower right hand vertical limb being elongated and bent inwards to form two similar approximately cylindrical recesses adapted to receive the cylindrical beads of adjacent sheets in such a manner as to permit of limited rotation of one sheet relatively to another around a vertical axis passing through the joint and more considerable angular changes by the possibility of threading the clutch members on the pile in the reverse direction to its normal direction.

2. Metallic sheeting and locking bars comprising a metallic sheet an approximately cylindrical bead on the longitudinal edges of the sheet and on opposite sides thereof, and a clutch member formed from an approximately H shaped bar the upper left hand vertical limb and the lower right hand vertical limb being elongated and bent inwards to form approximately cylindrical recesses.

3. Metallic sheeting and locking bars comprising a metallic sheet the longitudinal edges of which are provided with an approximately cylindrical bead and an independent locking member formed from an approximately H shaped bar the upper left hand vertical limb and the lower right hand vertical limb being elongated and bent inwards to form two similar approximately cylindrical recesses adapted to receive the cylindrical beads the mouths of the recesses being smaller than the diameter of the cylindrical beads but wider than the thickness of the metallic sheet so that the metal sheets when engaged with the clutch member will be securely interlocked in position and will be capable of angular displacement.

JOHN RACKER WEBB.

HENRY GEORGE GRANVILLE BLAKEMORE.