No. 717,885. PATENTED JAN. 6, 1903.

C. MERCÀDER.

PILING APPARATUS.

APPLICATION FILED MAY 18, 1901.

NO MODEL. 2 SHEETS—SHEET 1.

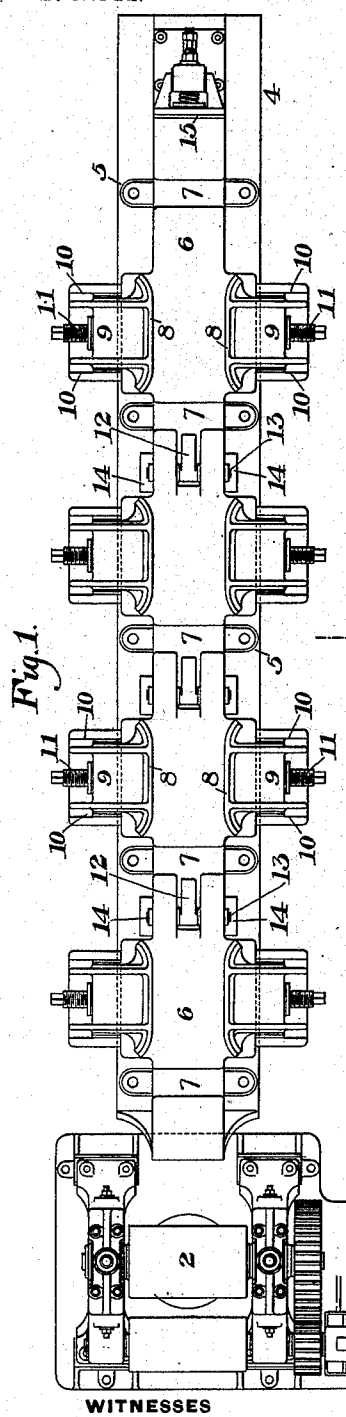


Fig. 1.

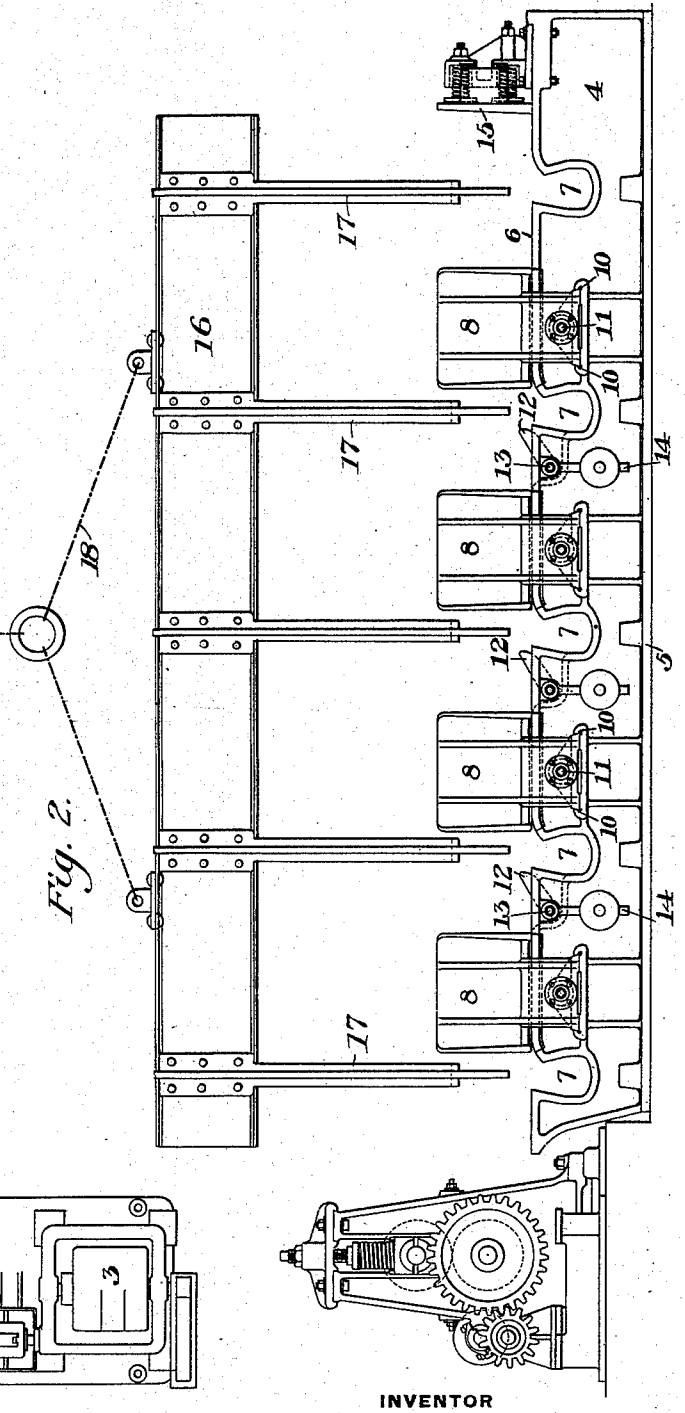


Fig. 2.

WITNESSES

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Fig. 4.

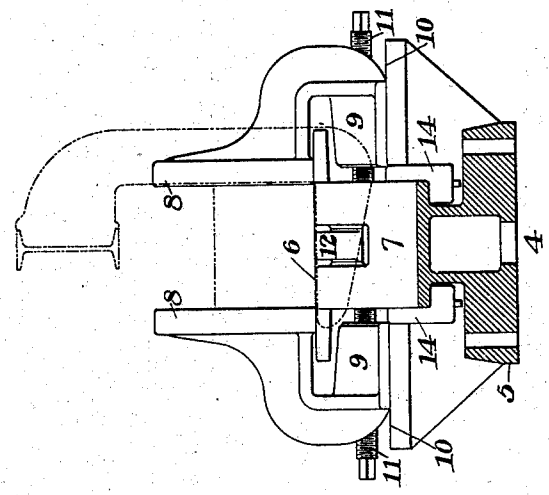
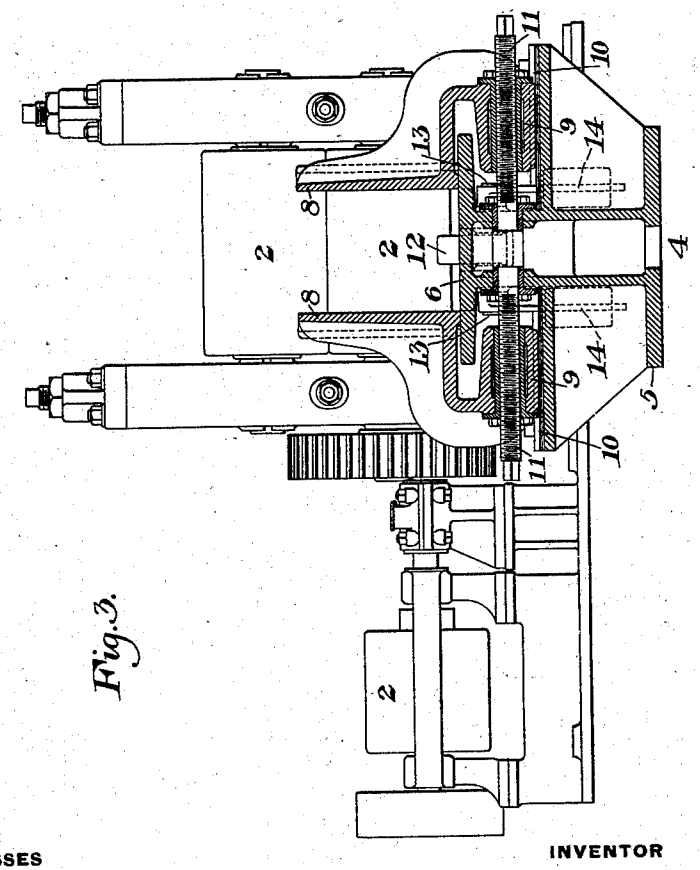


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

CAMILLE MERCÀDER, OF PITTSBURG, PENNSYLVANIA.

PILING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 717,885, dated January 6, 1903.

Application filed May 18, 1901. Serial No. 60,823. (No model.)

To all whom it may concern:

Be it known that I, CAMILLE MERCÀDER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Piling Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view showing one form of my improved apparatus. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged cross-section, and Fig. 4 is a cross-section illustrating the manner of lifting the pile from the apparatus.

My invention relates to the piling of metal sheets, strips, or bands, and is particularly designed for the piling of skelp as they are taken from the shear.

In the piling apparatus heretofore used for this purpose the pile of skelp when formed has been lifted by motive cylinders or suitable power connections and supported in lifted position by suitable catches or dogs. The elevated pile was then taken by a crane or other transfer mechanism to the point desired.

My invention is designed to do away with the mechanism for lifting the pile in the piling apparatus; and it consists in a piler having recesses in its base portion arranged to receive the arms of an overhead crane or other transfer apparatus by which the pile is lifted and moved.

It also consists in such apparatus in combination with means for preventing the skelp or other plate from entering the recesses as they pass into the piler.

In the drawings, 2 2 represent a pair of feeding-rolls, which may be driven by an electric motor 3 or in any other desired way, this part of the apparatus containing no part of my present invention. In front of these rolls is located the piling-machine, consisting of a longitudinal base 4, which is preferably formed of chambered castings, as shown in Figs. 3 and 4, and is bolted to the foundation through flanges 5. The top of this base is in the form of a table or platform 6, which is divided into a series of sections by transverse recesses 7, extending through the castings. These table-sections are provided with bell-mouthed guides 8 8, which are formed as part of U-shaped arms 9, arranged to slide toward and from each other transversely of the piler on dovetailed guideways 10. The guides are adjusted the proper distance apart by shaft 11, having right and left hand screw-thread portions engaging similarly screw-threaded portions in the U-shaped arms. The shaft may be provided with squared ends, as shown, for the application of a wrench, or any other suitable means may be provided for turning the shaft, and thereby moving the guides in and out from the longitudinal center line of the piler.

In order to prevent the front end of the plate as it passes through the piler from sagging down and entering one of the base-recesses, I provide swinging guides 12, which are secured to shafts 13, having counterweighted arms 14. The counterweights normally maintain the lifters in the upwardly-inclined position (shown in Fig. 2) in front of one or more of the recesses wherever they are found necessary, and as the skelp or strip is fed forward in the piler these lifters guide its front end upwardly until it has entered the next table-section, thus preventing sagging of the end into one of the recesses.

At the end of the apparatus I preferably provide a spring-buffer device 15, against which the ends of the strips may strike to stop them in proper place without injury to themselves or to the apparatus.

In operating the apparatus the skelp or other strips are fed forward by the rolls and drop upon the base, being held in position by the side guides and resting upon each other to form the pile. When a pile of the desired height has been obtained, the arms of an overhead crane or other transfer device may be inserted in the recesses of the base, as illustrated in Fig. 2 and by dotted lines in Fig. 4, and a pack thus lifted and transferred to the desired point.

I have shown the overhead crane as consisting of a longitudinal I-beam 16, with a depending U-shaped arm 17 secured thereto, it being operated by a chain device 18 or other suitable support.

The advantages of my invention result from the use of the recesses beneath the pile, which admit the arms of the transfer mech-

anism and do away with the necessity for hydraulic or other special mechanism for lifting the pile in the apparatus, and also from the automatically-acting guides, which prevent the front end of the bottom strip from entering the recesses in the base, and, further, from the ease of adjusting the guides and the simplicity of the apparatus.

Many changes may be made in the form and arrangement of the apparatus and the means for feeding strips or plates thereto without departing from my invention.

I claim—

1. Piling apparatus comprising a stationary base having transverse recesses with protecting guides or fingers arranged to prevent the metal bar or strip from entering them, and an overhead carrier movable toward and from the base in its receiving position, and having arms arranged to enter the recesses; substantially as described.

2. Piling apparatus having a base with transverse recesses, said recesses having protecting guides or fingers to prevent the metal strip from entering them, and an overhead carrier having arms arranged to enter the recesses; substantially as described.

3. Piling apparatus having a series of transverse apertures to receive lifting-arms for the pile, and yielding guides arranged to prevent the front end of the plate from dropping into the said recesses; substantially as described.

4. In piling apparatus, a base having movable side guides with flaring front ends, mechanism for adjusting the guides toward and from each other simultaneously, and feeding mechanism arranged to feed plates or strips one above the other into the space between the guides; substantially as described.

5. The combination with a piling-machine having transverse recesses in its base portion, of an overhead crane having arms arranged to enter said recesses, and yielding guides arranged to prevent the end of the bottom strip from dropping into the recesses; substantially as described.

6. Piling apparatus having transverse recesses arranged to admit lifting-arms for the pile, side guides extending above the table-sections between the recesses, and counter-weighted swinging guides arranged to prevent the front end of the bottom strip from entering the recesses; substantially as described.

In testimony whereof I have hereunto set my hand.

CAMILLE MERCÀDER.

Witnesses:
LEILA M. REDMAN,
GEO. B. BLEMING.