To all whom it may concern:

Be it known that I, ERNEST S. CONNORS, a citizen of the United States, residing at St. Francis, in the county of Aroostook and State of Maine, have invented new and useful Improvements in Bark-Softening Vats, of which the following is a specification.

This invention relates to an apparatus for softening the bark of logs to permit the same to be readily stripped therefrom, the object of the invention being to provide a simple and effective type of apparatus for this purpose, in which an efficient circulation of the hot water is obtained, and which preferably embodies a pair of tanks supplied from a common heating coil, so that while one log after treatment is being stripped upon removal from one tank, other logs may be undergoing the softening process in the two tanks, so that the strippers will be constantly supplied with logs to work upon.

A further object of the invention is to provide an apparatus of the character described wherein provision is made for holding the logs so as to prevent them from interfering with the proper circulation of the water, and wherein provision is also made for conveniently controlling the flow of the water so that one or both tanks or vats may be employed, as desired.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:

Figure 1 is a top plan view of a bark softening apparatus embodying my invention. Fig. 2 is a vertical longitudinal section through one of the vats or tanks. Fig. 3 is a vertical transverse section of the same. Fig. 4 is a sectional end elevation on the line 4—4 of Fig. 1. Fig. 5 is a horizontal longitudinal section through the coil and flow pipes.

In carrying my invention into practice I preferably provide a pair of oblong tanks or vats 1 and 2, of somewhat greater length, depth and breadth than the logs to be submerged and treated therein. Each of these tanks is open at the top and made of wood, metal or other suitable material.

Each tank is designed to contain a body of hot water supplied in a manner hereinafter described, and in which the log is submerged so that the bark thereof will be thoroughly soaked and loosened and placed in condition to be readily peeled or stripped from the log. Each tank or vat is provided at its sides with vertical fenders or partitions 3 and at its ends with similar fenders or partitions 4, which partitions provide passages or channels 5 for the free circulation of the water and at the same time retain the log in position and prevent it from slamming against the sides or ends of the tank and interfering with the free circulation of the water. Extending across each tank are transverse retaining bars 6 adapted to be secured in position in any preferred manner. These bars are designed to hold the log down so that it will be immersed in the body of hot water.

Arranged at one end of the apparatus is a heating coil 8, the ends of which communicate respectively with elbow-shaped supply pipes 9 leading to the adjacent ends of the respective tanks or vats, each of which pipes is provided with a controlling valve 10. Connected with the return portion of the coil is a supply pipe 10′ having branches 11 and 12 communicating respectively with the vats or tanks and each provided with a controlling valve 13. Each tank is further provided at one end with a valved drain connection 14 for the exhaust of the water therefrom when desired.

In practice, the coil 8 and pipe 10′ may be arranged within and heated by a furnace, or heated by an open fire, and it will be understood that after the pipes and tanks have been filled to the desired degree with water and the coil and supply pipe are heated a circulation will be established to cause the water to flow from the supply pipe to the tanks and back to the coil, whereby a constant circulation of water may be obtained. When the water in the tanks is heated to the desired degree the logs are inserted therein and the cross bars 6 applied to retain them in position. By the action of the hot water the bark upon the logs is softened so that it may be easily or conveniently stripped therefrom, leaving the log in condition for use in the manufacture of paper pulp or for other commercial purposes. The mode of treatment may be so timed that while one log is being removed from one tank for stripping and a new one is being inserted in its place, the log within the other tank will be under treatment so that
it will be ready for stripping after the first named log has been stripped, enabling a continuity of operation to be maintained in softening and stripping the logs. By means of the valved connections either tank or vat may be employed independently of the other, as will be readily understood. Both tanks are, however, preferably simultaneously employed in order to secure economy of time and labor in enabling a gang of strippers to be kept constantly employed.

I claim:—
A bark softening apparatus comprising a hot water tank, sets of parallel, horizontal and vertical fender strips arranged respectively upon the ends and sides of said tank to hold the log spaced therefrom and to provide water flow passages for the circulation of the water between the log and walls of the tank, and horizontal cross bars having pivotal and adjustable engagements with certain of said side fender strips for arrangement at different elevations to engage and hold an inclosed log of greater or less diameter submerged in the body of water in the tank.

In testimony whereof I affix my signature in presence of two witnesses.

Witnesses:

J. F. THEBOURNE,
Geraldine Barry.

ERNEST S. CONNORS.