A. E. PALMER.

CLAMPING MACHINE.

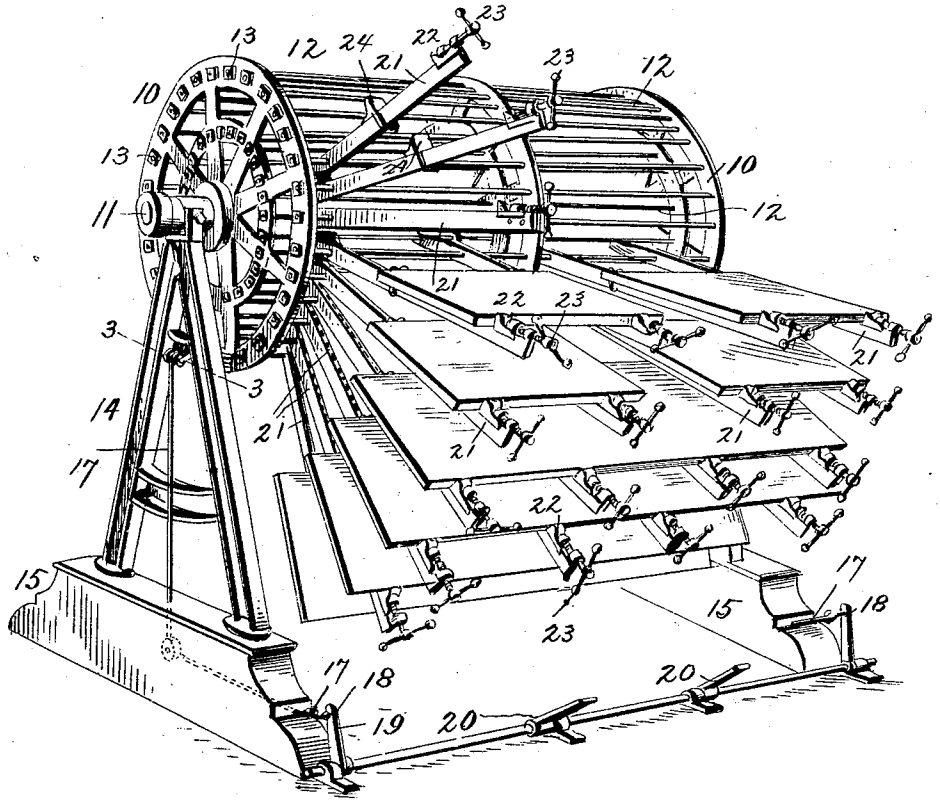
APPLICATION FILED JUNE 23, 1908.

918,192.

Patented Apr. 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2

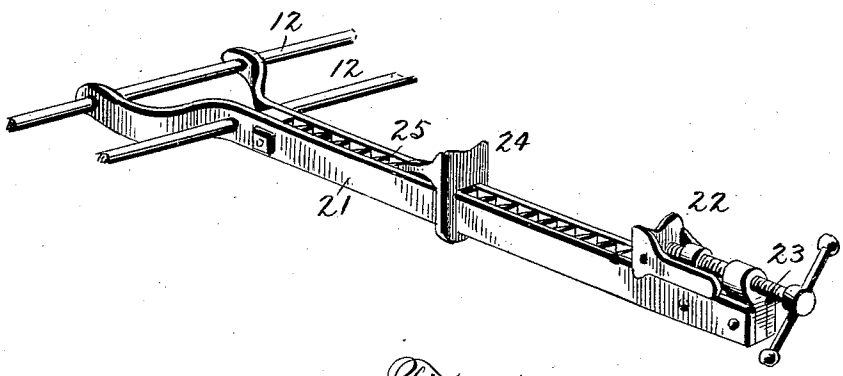
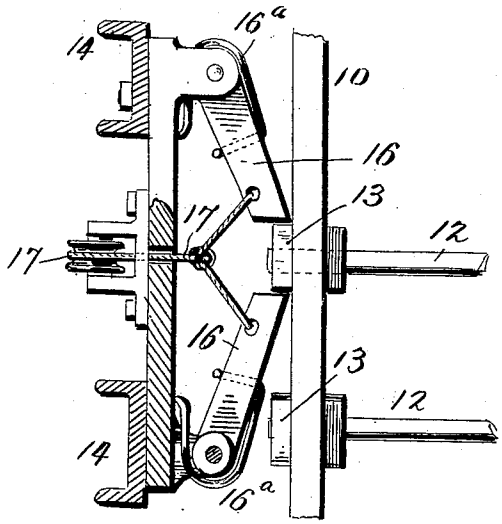


Fig. 3.



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CLAMPING-MACHINE.

No. 918,192. Specification of Letters Patent. Patented April 13, 1909.

Application filed June 23, 1908. Serial No. 440,041.

To all whom it may concern:

Be it known that I, ALBERT E. PALMER, a citizen of the United States, residing at Owosso, in the county of Shiawassee and State of Michigan, have invented certain new and useful Improvements in Clamping-Machines, and do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the characters of reference marked thereon.

The object of my invention is to provide a machine in which, for example, strips of wood to be glued together may be clamped, which machine will render the operation of assembling the pieces for clamping the same and removal of the glued or united pieces capable of being conveniently and expeditiously performed, and in which machine a large quantity of work may be carried in comparatively small space, and to this end the invention consists in the machine constructed substantially as hereinafter specified and claimed.

Referring to the drawings—Figure 1 is a perspective view of a machine embodying my invention, showing only a portion of the clamp-supporting arms, and pieces of wood being shown mounted on some of the arms that are shown, those portions of the machine omitted being omitted in the interest of clearness; Fig. 2 is a detail view in perspective of one of the clamp-supporting arms; and Fig. 3 a horizontal section on the line 3—3 of Fig. 1.

In the embodiment of the invention illustrated in the drawings, a drum or reel-form carrier is employed that is constructed of two circular open-work heads or spiders 10 mounted on a horizontal shaft 11 and two circular concentric series of parallel rods 12 that connect the heads or spiders, and of course extend parallel with the shaft. The ends of the rods project to the outer side of the heads or spiders, and they are threaded to receive securing nuts 13. The ends of the shaft also project beyond the heads or spiders, and are respectively journaled in bearings at the top of A-shaped side frames 14 that are bolted to floor sills or beams 15. The drum or reel may thus be revolved. To lock it from turning except when desired, the locking mechanism is employed, and which, as shown best in Fig. 3, may consist of two similar but oppositely extending pawls or dogs 16, pivoted respectively to lugs on the inner side of one or both of the side frames, so that their free ends are in position to engage the opposite sides of one of the nuts 13, and thus lock the reel or drum from rotation in either direction. To remove the ends of the locking dogs from the path of the nuts, and thus leave the reel or drum free to be turned, I attach one end of a cord or rope 17 to the free ends of the dogs, and the other end to a crank arm 18 on a rock shaft 19, journaled in bearings on the floor, which shaft is provided with one or more treadles 20, by the depression of which the shaft may be rocked in the direction to pull the rope to withdraw the dogs or pawls from the path of the nuts. Springs 16^a acting upon the dogs operate normally to move them to and hold them in position for engaging a nut. It will be observed that the locking means described, especially since it utilizes the nuts on the rods, is a very simple and yet efficient device.

Mounted on the rods in pairs, are radially extending arms 21, their appearance and arrangement resembling that of the spokes of a wheel, and on each arm a clamp is mounted, consisting of a pair of jaws, one jaw 22 being mounted at the outer end of the arm, and provided with an adjusting and clamping screw 23, and the other jaw 24 being slidably mounted on the arm and adapted to be held by means of a dog that engages a series of ratchet teeth 25 in the arm in such position in a radial direction as may be required to suit the size and number of the strips or pieces to be glued and clamped. Each arm is perforated for the passage of the rods of the two concentric series, and is slidable longitudinally of its pair of supporting rods so that the distance between two arms of a pair may be varied to suit the length of the strips or pieces to be clamped, and in order to steadily or substantially support the arm, its inner rod-engaging end is forked or bifurcated so as to make its point of engagement with the innermost rod widely enough separated to make the support a steady and substantial one. It will be evident that one or more circular series of pairs of arms may be embodied in the same machine, the number of series employed depending of course upon the length of the machine.

The operation of the machine will be read-

ily understood. By reason of the mounting of the reel or drum on a horizontal axis, a set of clamps either for the placing therein of the strips to be glued or clamped, or the removal of the glued strips therefrom, is presented to the workman at a most convenient height and in a most convenient position, for the performance of the work, and one set of clamps after another may be most readily emptied and refilled, and it will be evident that a great quantity of work may be carried by the machine at one time.

It of course is to be understood that the machine comprises a complete circular series of arms 21, a portion of such series only being shown in Fig. 1 in order to more clearly illustrate therein the construction of the reel.

Having thus described the invention, what is claimed is—

1. A clamping machine having a rotatable series of radially extending arms, clamps on the arms comprising coacting jaws arranged in pairs, the jaws of a pair alining in a direction radial to the axis of rotation of the series, and means supporting said rotatable series of arms with the axis thereof in a horizontal position.

2. A clamping machine having a plurality of rotatable series of radially extending arms, and clamps on the arms comprising co-acting jaws arranged in pairs, one jaw being nearer the axis of rotation than the other, and the arms of the several series alining in a direction parallel with the axis of rotation, whereby an extended body may be supported at several points of its length by a series of arms.

3. A clamping machine having a rotatable series of radially extending clamp-carrying arms, the arms being arranged in pairs and each arm carrying clamping jaws, the arms of a pair being adjustable toward and from each other in a direction parallel with the axis of rotation.

4. In a clamping machine the combination of a drum or reel composed of heads and concentric series of connecting rods, and clamp-carrying arms mounted on the rods.

5. In a clamping machine the combination of a drum or reel composed of heads and concentric series of connecting rods, and clamp-carrying arms mounted on the rods, the arms being arranged in pairs and movable toward and from each other.

6. In a clamping machine the combination of a drum or reel composed of heads connected by rods, clamp-carrying arms mounted on the rods, projections on a head, and a locking device to coöperate with said projections.

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

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