W. F. BORING.

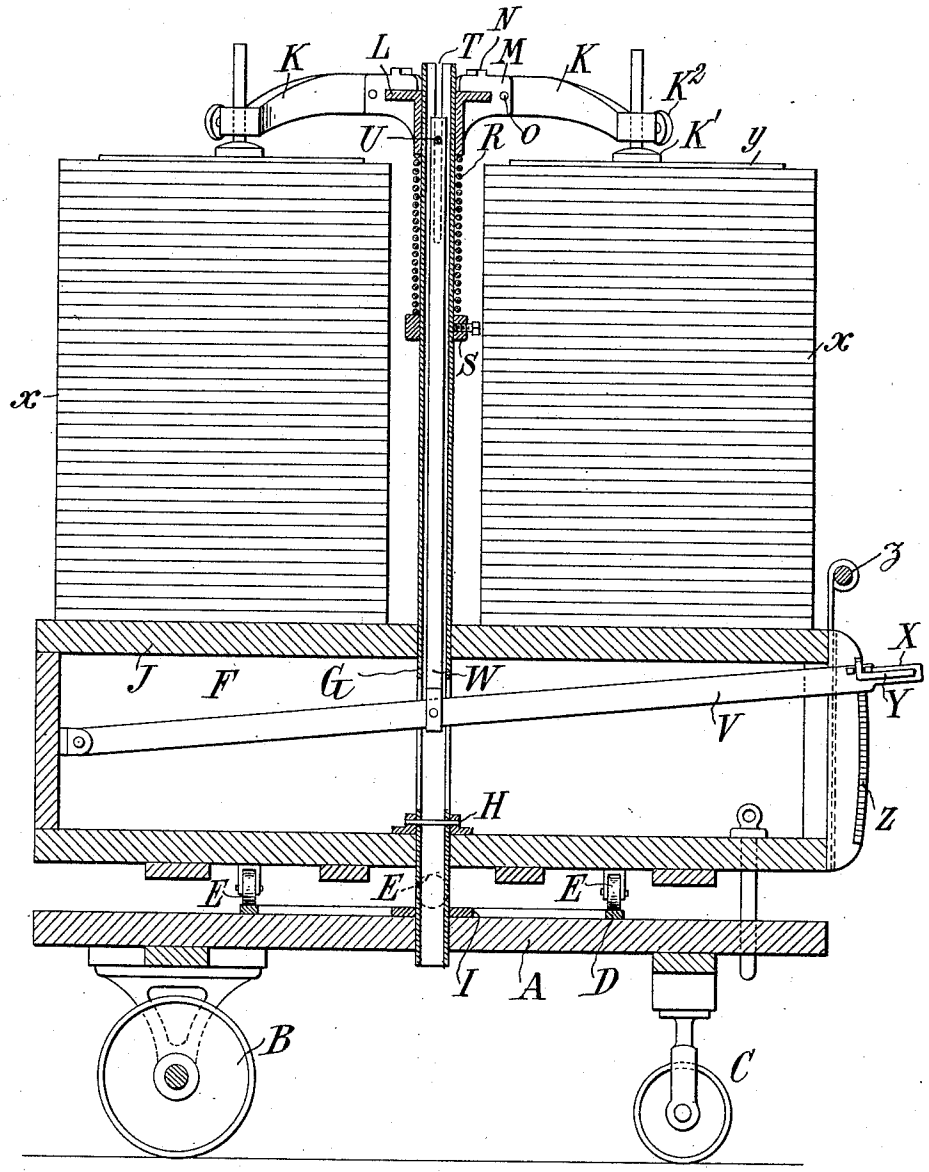
APPLIANCE FOR CLAMPING AND TRANSPORTING TABLETS OR THE LIKE IN PILES.

APPLICATION FILED OCT. 23, 1908.

1,005,148. **Patented Oct. 10, 1911.**

2 SHEETS—SHEET 1.

FIG. 1.



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2 SHEETS—SHEET 2.

FIG. 2.

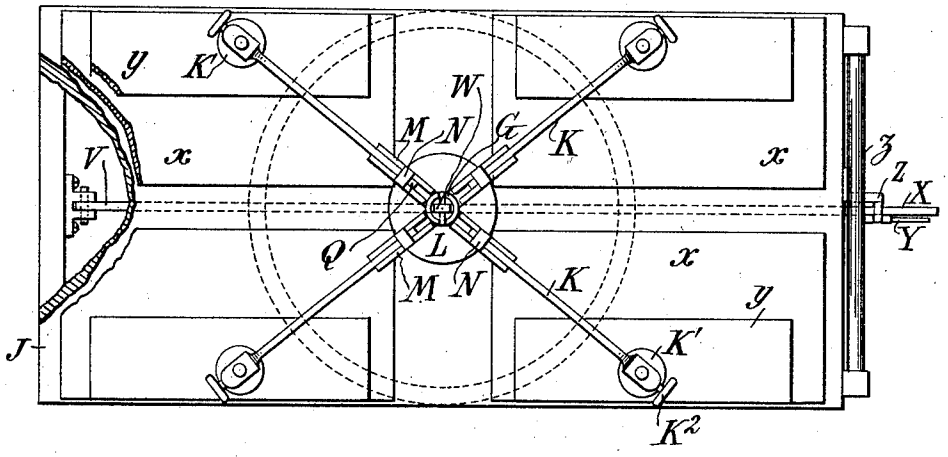
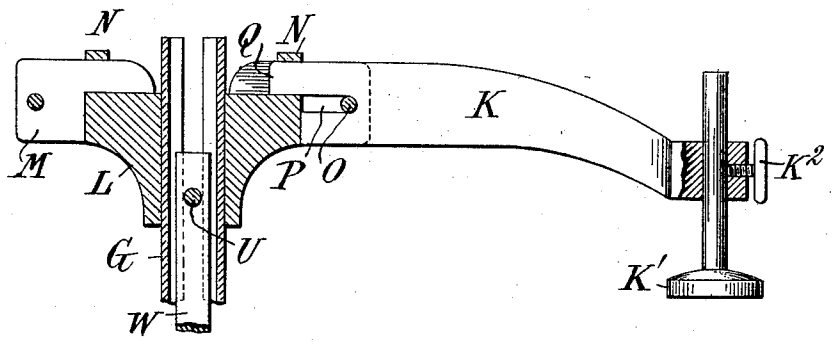


FIG. 3.



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UNITED STATES PATENT OFFICE.

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APPLIANCE FOR CLAMPING AND TRANSPORTING TABLETS OR THE LIKE IN PILES.

1,005,148. Specification of Letters Patent. **Patented Oct. 10, 1911.**

Application filed October 23, 1908. Serial No. 459,268.

To all whom it may concern:

Be it known that I, WILLIAM FRANK BORING, a citizen of the United States, residing in Huntingdon, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Appliances for Clamping and Transporting Tablets or the Like in Piles, of which the following is a specification.

This invention relates to a device for simplifying several of the operations in connection with the manufacture of tablets, books, pads or the like.

In the manufacture of tablets, books, pads or the like the paper is laid up in sections, each of which is adapted to form a number of tablets for instance, and such sections are then divided by a suitable cutting machine. The sections are cut in piles of several inches in height to their final size and are then ready for the gluing operation.

According to my invention I provide a carriage or truck which is adapted to receive the piles of tablets when delivered from the cutting machine, and to hold such piles in proper position until the gluing operation is performed. After the applied glue has dried, the piles of tablets are released and removed from the machine, so that the latter is again in condition to receive a further supply of tablets.

In its preferred form my invention comprises a truck having means for simultaneously clamping a number of piles of tablets, preferably such means being operated by a single lever or other hand operated part. Preferably also a platform for receiving the tablets is mounted to turn upon the truck body, so that the cutter may pile the tablets thereon without moving the truck.

My invention includes other features of improvement which will be hereinafter referred to.

Referring to the drawings which illustrate one embodiment of the invention,—Figure 1 is a vertical longitudinal section of the invention. Fig. 2 is a plan thereof. Fig. 3 is a detail of one of the clamping arms.

Referring to the drawings let A indicate a suitable truck which is shown as provided with wheels B and C. Upon the top of the truck A is arranged a circular track D upon which run wheels E mounted upon the lower side of the turn table F. Extending through the turn table F and the truck A is a tubular shaft G, such shaft being non-rotatively secured to the turn table F by a pin H, and extending through a collar I on the truck A, and down through the platform of the latter. By this means the turn table F is pivoted to the truck, the wheels E enabling it to be rotated thereon without undue expenditure of force. The tubular shaft G extends upwardly through the receiving platform J of the turn table F, and supports at its upper end a series of clamps K K. In the drawing four of such clamps are used, but a fewer or greater number may be employed if desired. The clamps K are preferably mounted upon a head L, which is constructed as shown, such head comprising a hub-like member adapted to fit down over the upper end of the tubular shaft G, and having arms M M which are slotted longitudinally to receive the clamps K. Above each slot is a bridge piece N, and extending across each slot is a pin O. Each of the clamps K is provided at its inner end with a slot P adapted to receive the pin O, and an extension Q fitting over the body of the head and beneath the bridge piece N. By this means a firm and yet readily detachable connection between the clamps K and the head is obtained. The clamps may be connected to the hub and the hub to the shaft in any other suitable manner, however.

The head L with its clamping arms is normally held in its raised position by a spring R, surrounding the tubular shaft G, the lower end of which spring bears upon a collar S fastened to the shaft G, which collar may be adjusted by means of a set screw to any desired height upon the shaft. Any other suitable means may, however, be used for holding the head in a raised position.

The upper end of the shaft G is preferably slotted at T to receive a pin U carried by the head L, which pin is connected with a hand lever or other suitable member V, by means of a rod W or the like through the upper end of which the pin U extends, and which is pivoted to the lever at its lower end as shown. The lever V is pivoted at its rear end to the turn table and its front end extends outwardly through the latter, and is provided with an operating handle

X having a catch device Y adapted to coact with a notched sector Z to hold the lever in its adjusted positions. Any other suitable means for operating the clamps may, however, be employed.

Each of the arms K is preferably provided with an adjustable foot K′ designed to be held in position by a hand screw K^2, so that it may be readily adjusted to the height desired.

In the use of the device the truck is pushed or drawn (by a tongue or handle *z* shown) alongside of a cutting machine, and as the pad sections are cut by the operator they are piled upon the turn table F in stacks usually two or three feet high. When one stack is completed the turn table may be moved around so that the unoccupied space is convenient to the cutter. In piling up the tablets (lettered *x* in Fig. 1) the latter are arranged with their backs (or portions to be glued) outwardly, and when the proper number of piles are laid up the operator depresses the handle X whereupon all of the clamps are brought downwardly and each of the piles of tablets is held rigidly to the turn table. Strips of board *y* may be interposed between the feet K′ and the tablets if desired. Should the stacks be of unequal height this can be easily compensated for by adjustment of the feet K′. The truck is then taken to the gluing room, and glue is applied to the tablets as they stand upon the truck. When the glue dries (which takes place quickly) the handle is released and the clamps raised by the spring R, and held in their upward positions while the tablets are separated by the operatives, the stacks being still upon the truck. As they are separated they are placed on other trucks and taken to the binding room ready to be sent through the binding machines.

By the use of the present invention a number of handlings of the tablets is avoided and a considerable gain in time is effected. Moreover, the tablets are less likely to be marred or otherwise injured. The additional work imposed upon the operator of the cutting machines is very trifling, amounting merely to moving the turn table and operating the clamping lever.

It will be understood that the device is useful in connection with other operations in the manufacture of pads, books and similar articles.

While I have illustrated my invention in its preferred form it will be understood that I do not wish to be limited to the structure herein shown as many changes may be made therein without departing from the invention.

It is desirable that the device be bodily movable, and to this end it has been shown as mounted upon wheels. I use the term "truck" to indicate any movable member which can be transported from place to place in the factory. Other changes of a like character can be made.

What I claim is:—

1. In an appliance of the character described, the combination with a truck, of a central upright standing above said truck, a plurality of clamping arms on the upper end of said upright and means for simultaneously applying a downward pressure on said arms for clamping piles of tablets or the like on said truck.

2. In an appliance for clamping and transporting tablets, the combination with a truck, of a platform revolubly mounted on said truck, a central upright on said platform a plurality of clamping-arms on the upper end of said upright, and means for simultaneously applying a downward pressure on said arms for clamping piles of tablets or the like to said platform.

3. In an appliance for clamping and transporting tablets, the combination with a truck, of an upright mounted on said truck, a hub mounted on said upright, clamping arms projecting from said hub, and means for applying a downward pressure on said arms for clamping piles of tablets or the like on said truck.

4. In an appliance for clamping and transporting tablets, the combination with a truck, of an upright mounted on said truck, a hub slidably mounted on said upright, clamping arms projecting from said hub and a lever connected to said hub whereby the same and the clamping arms thereon may be moved downwardly and thereby clamp piles of tablets or the like on said truck.

5. In an appliance for clamping and transporting tablets, the combination with a truck, of an upright mounted on said truck, a hub slidably mounted on said upright, clamping arms projecting from said hub, a lever connected to said hub whereby the same and the clamping arms thereon may be moved downwardly and thereby clamp piles of tablets or the like on said truck, and means for maintaining said clamping-arms in their clamping position.

6. In an appliance for clamping and transporting tablets, the combination with a truck of a tubular upright mounted thereon, a hub slidably mounted on said upright, clamping arms projecting from said hub, a lever, a rod within said tubular upright connecting said hub and lever, whereby downward pressure may be applied to said hub and clamping arms to clamp piles of tablets or the like on said truck, and means for retaining said clamping arms in their clamping position.

7. In a device of the character described, the combination with a truck, of a platform revolubly mounted thereon, an upright mounted on said platform, a hub slidably

mounted on said upright, clamping arms projecting from said hub, means for applying a downward pressure on said hub and clamping-arms to clamp piles of tablets or the like on said platform, and means for retaining said clamping-arms in clamping position.

8. In a device of the character described, the combination with a truck, of a platform revolubly mounted thereon, an upright mounted on said platform, a hub slidably mounted on said upright, clamping arms projecting from said hub having adjustable feet, and means for applying a downward pressure on said hub and clamping arms to clamp piles of tablets or the like on said platform.

9. In a device of the character described, the combination with a truck, of an upright mounted thereon, a hub slidably mounted on said upright, clamping arms projecting from said hub, adjustable feet on said clamping arms, and means for applying a downward pressure on said hub and clamping arms for clamping piles of tablets or the like on said truck.

10. In a device of the character described, the combination with a truck, of an upright mounted thereon, a hub slidably mounted on said upright, clamping arms projecting from said hub, means for applying a clamping pressure to said clamping arms to clamp piles of tablets or the like on said truck, and means normally holding said clamping arms away from the truck.

11. In a device of the character described, the combination of a turn table, a hollow shaft passing through said turn table, clamps on said shaft, a handle or the like, and an operative connection between said handle and said clamps extending through said hollow shaft.

12. In a device of the character described, the combination of a platform, a clamping head, said head having a bridge N, and a clamping arm having a portion Q extending beneath said bridge.

13. In a device of the character described, the combination of a platform, a clamping head, said head having a bridge N and pin O, a clamping arm having a portion Q extending beneath said bridge, and a slot P extending over said pin.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM FRANK BORING.

Witnesses:

D. E. JOHNSTON,

C. M. TAYLOR.