(No Model.) 2 Sheets—Sheet 1.

T. GIBON.

METHOD OF PACKING LEAF TOBACCO, &c.

No. 496,221. Patented Apr. 25, 1893.

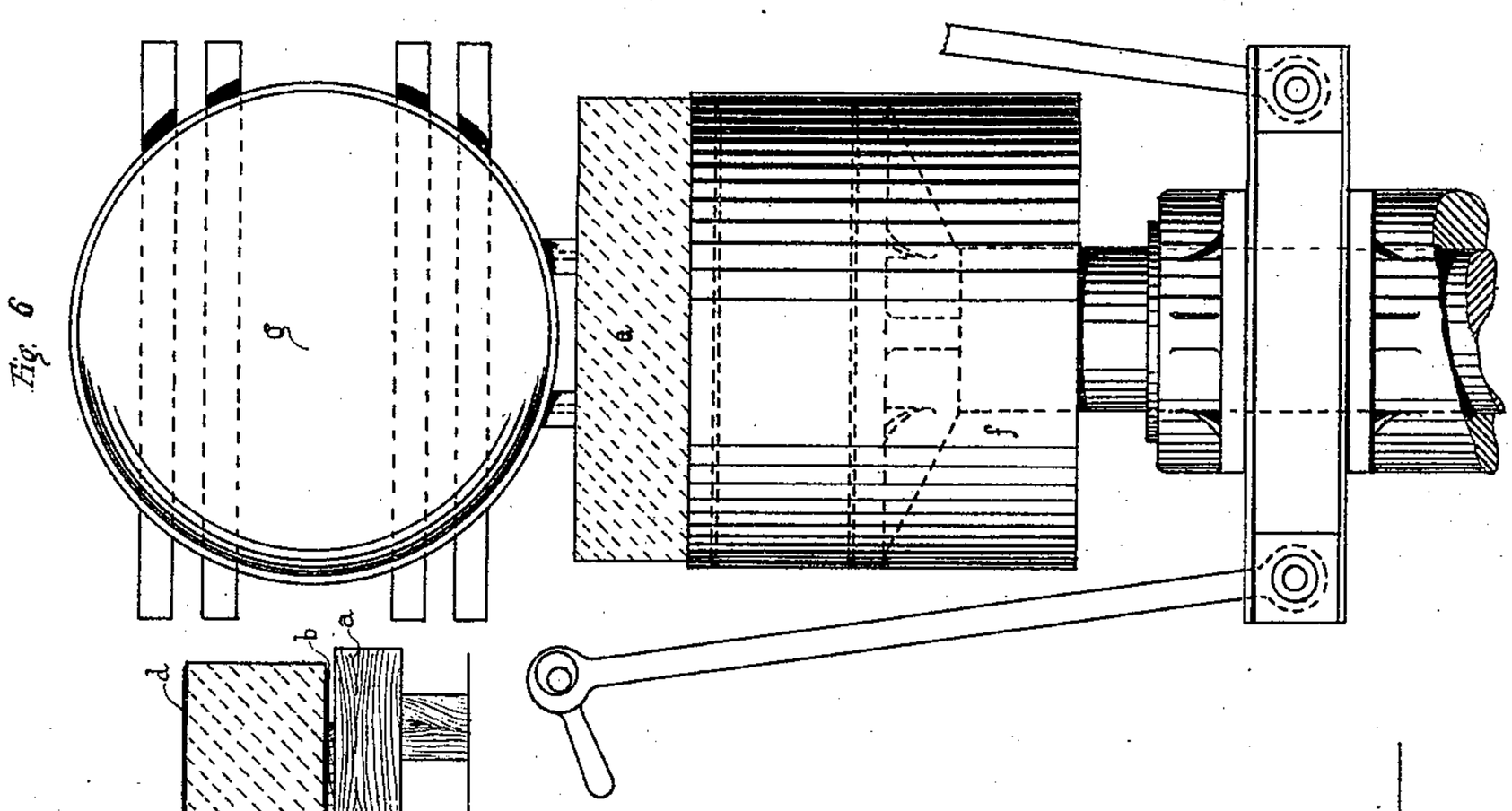

Fig. 6

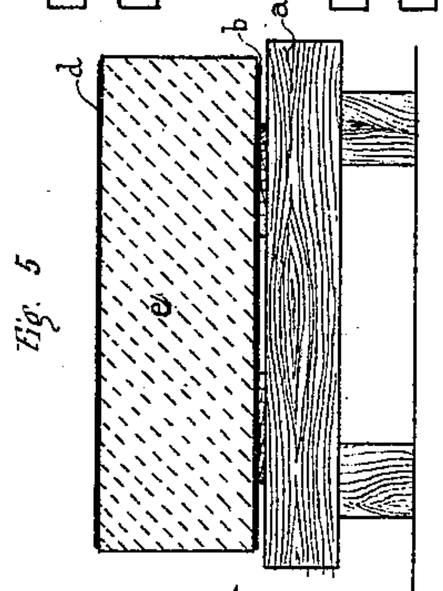

Fig. 5

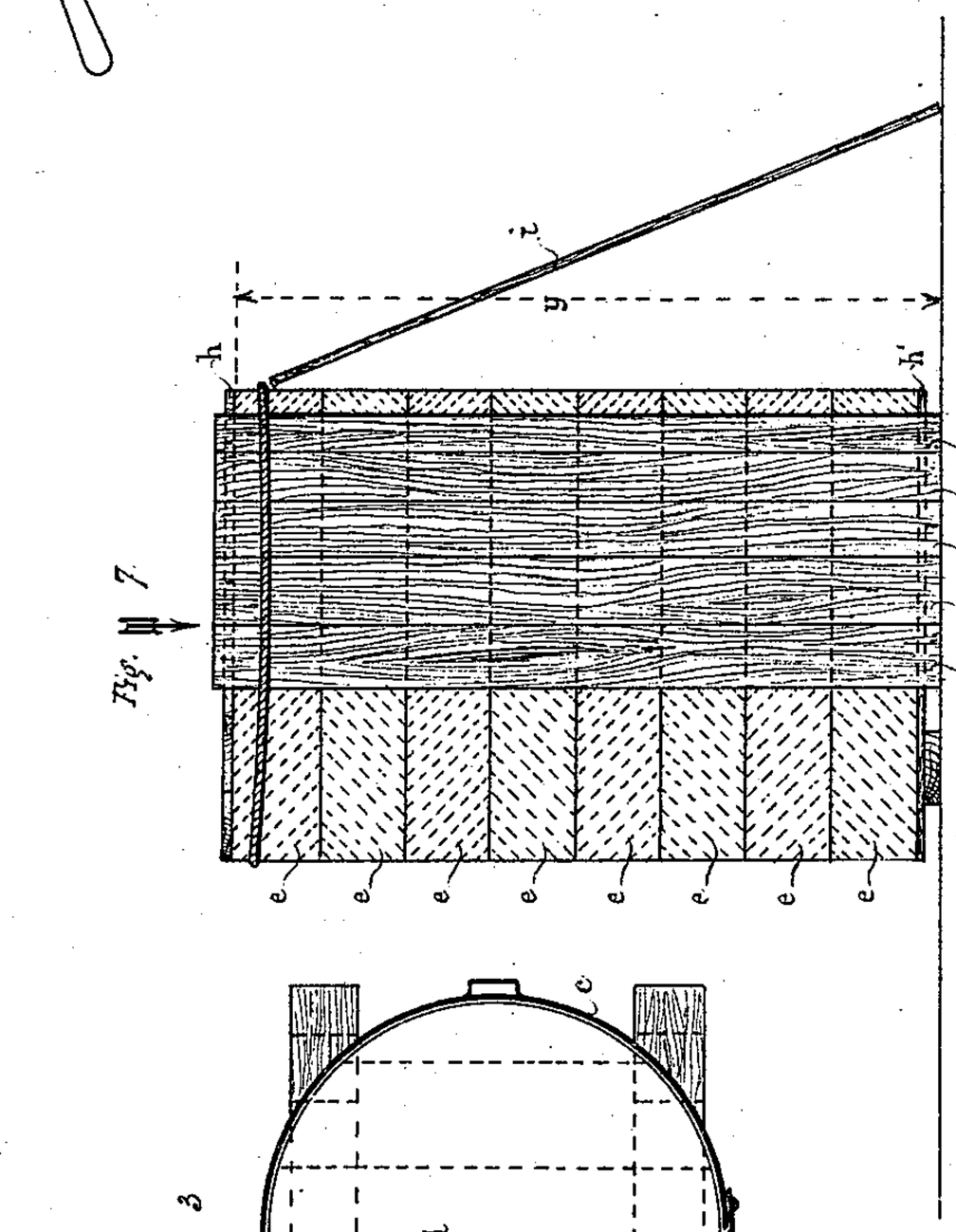

Fig. 7

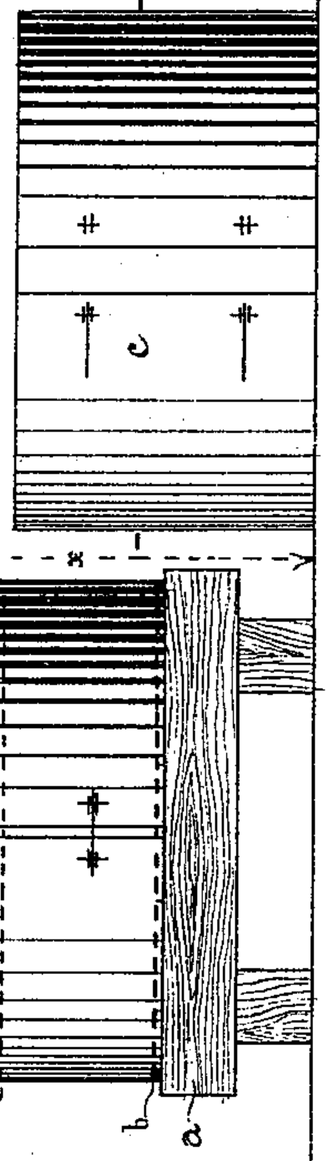

Fig. 4

Fig. 2

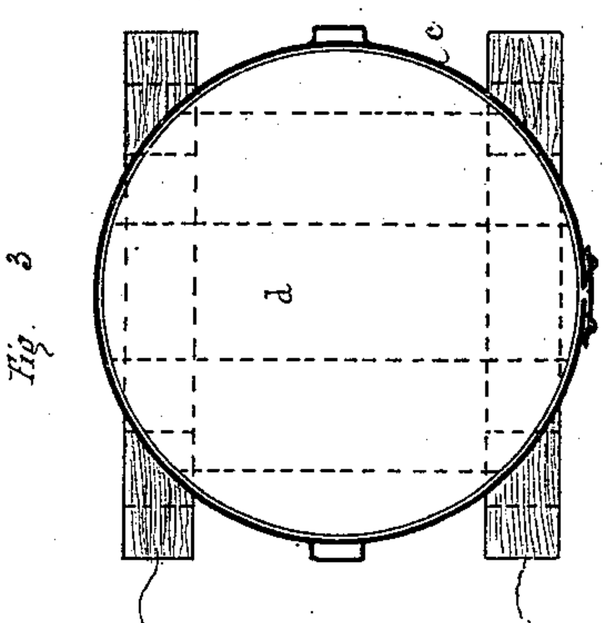

Fig. 3

Fig. 1

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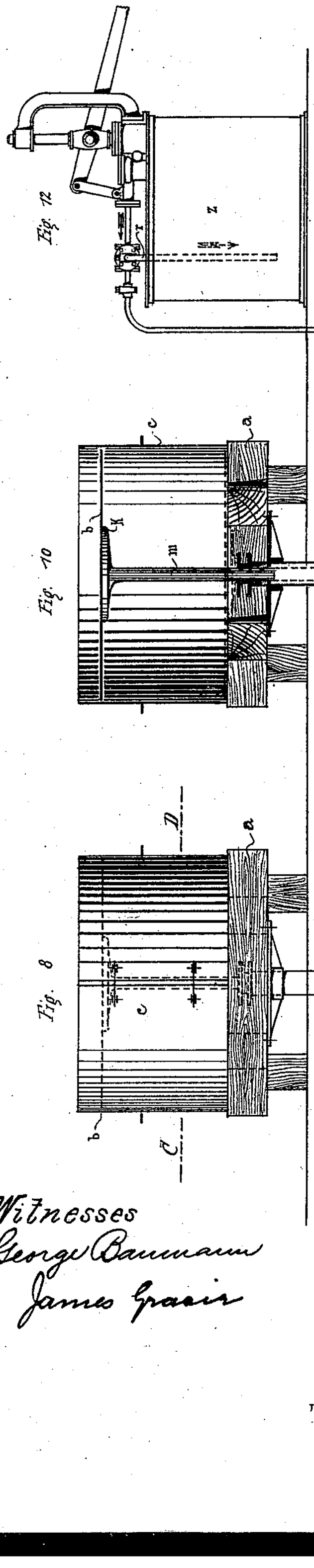
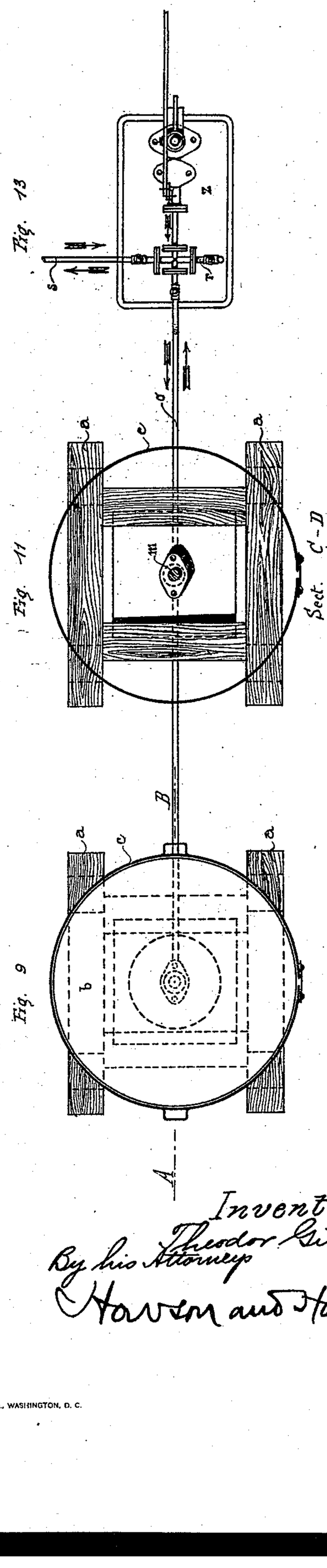
(No Model.) 2 Sheets—Sheet 2.

T. GIBON.

METHOD OF PACKING LEAF TOBACCO, &c

No. 496,221. Patented Apr. 25, 1893.





Witnesses
George Baumann
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UNITED STATES PATENT OFFICE.

THEODOR GIBON, OF BREMEN, GERMANY.

METHOD OF PACKING LEAF-TOBACCO, &c.

SPECIFICATION forming part of Letters Patent No. 496,221, dated April 25, 1893.

Application filed February 13, 1892. Serial No. 421,372. (No model.) Patented in Germany May 11, 1890, No. 55,902.

To all whom it may concern:

Be it known that I, THEODOR GIBON, a subject of the Emperor of Germany, and a resident of Bremen, Germany, have invented a Method of Packing Leaf-Tobacco, (for which I have received Letters Patent in Germany, dated May 11, 1890, No. 55,902,) of which the following is a specification.

My invention consists of a method of packing leaf tobacco.

In the accompanying drawings, Figure 1 represents a bundle of tobacco to be packed. Fig. 2 is a side elevation, and Fig. 3 is a plan view of a split inclosing ring or hoop in which the leaf tobacco is first placed. Fig. 4 is a view of one of the split rings or hoops open. Fig. 5 is a vertical section of a pressed layer after the ring has been removed. Fig. 6 is a view of a hydraulic packing press with the top plate raised. Fig. 7 is a view illustrating the finishing step in the packing process. Figs. 8 to 13 inclusive are side and plan views, partly in section, of a modified form of the preparing hoop appliances.

Referring to Figs. 2 and 3, *a* is a wooden support consisting of two wooden carriers with legs connected with each other above by two planks. Upon this support *a* a circular iron plate *b* is at first placed, and upon this plate is arranged an inclosing ring or hoop *c* beat out of a sheet of metal, which is fastened in its cylindrical form by means of hinges. The height *x* corresponds approximately to the belly height of the packers, that is to say, about one meter. The tobacco bundles are packed in the sheet iron hoop or ring from the top until it is completely filled. Another circular iron plate *d* is then put on and the contents pressed together by means of screws, levers or other means, until the upper plate *d* is at about the height *d'*. If small cakes of tobacco are to be formed a number of plates as required may be inserted so that the contents will be divided into a number of layers, as for instance, when there is no room on the top of the barrel for a whole cake. After having applied the pressure for a short time, say from five to ten minutes, the closing hinges of the sheet metal inclosing ring are released which will allow the ring to expand to admit of its being lifted off with ease (see Fig. 4). The upper and lower iron plates *d* and *b* and the tobacco *e* between the same will remain on the wooden support *a* (Fig. 5). These are then inserted and lowered in the chamber *f* of a hydraulic press, the ram of the press being allowed to descend as the package is put in place, (Fig. 6.) As many fillings and plates as the press will hold are then inserted on top of the first. Any desirable number of sheet metal inclosing rings for packing and giving a first pressure may be employed at a time. Three persons may very comfortably be employed in packing each inclosing ring by standing erect around the same without requiring any other person to hand over the tobacco, each packer taking the tobacco himself, while in the case of a barrel, but one packer can be packing at a time in a stooping position, and he will require some one to hand over the tobacco to him. Moreover, the tobacco will, when being packed in barrels or hogsheads suffer from being tramped upon, which does not occur in packing the mantle. The packing in the barrel or hogshead has to be done by men; the packing into the inclosing ring can be done by women, which is very much cheaper.

While the press is under pressure a fresh quantity of tobacco is got ready in the iron ring or packing hoop *c*, after the same has been again closed and placed on the wooden support *a*.

In case it is desired to obviate the necessity of the packers stooping down into the hoop when beginning to pack the same, the apparatus shown in Figs. 8 to 13 may be employed.

The iron plate *b* is lifted, by the pressure water of the same pump which operates the press, the water entering the chamber *n* through the pipe *o* and thus raising the rod *m* with the plate *k*, and the plate *b* (which rests upon the latter), to a convenient height. By subsequently allowing the hydraulic pressure to escape, the tobacco packed on above is gradually lowered as required, until the plate *b* rests on the wooden support *a*.

z is the water chamber of the pump.

s is the inlet and outlet of the press, and *r* is the outlet for the water from the hoop.

Fig. 6 shows a press with the cover *g* open. The pressed cakes *e* are forced out at the top by the hydraulic pressure water, and the

plates and cakes of tobacco are alternately lifted off.

The plates are put aside but the cakes of tobacco *e*, as shown in Fig. 7, are placed the one on top of the other to a height of about one hundred and fifty centimeters as indicated by *y*, a wooden barrel bottom *h'* having two cross pieces being placed below. These cross pieces will leave room for a binding band for the barrel or hogshead at the lower ends of the staves, as will be referred to later on. I now form a complete barrel or hogshead around the cakes of tobacco, thus piled on top of each other, in the following manner, instead of getting an empty hogshead ready into which the packer had to climb.

Around the cakes *e* piled up as high as indicated by *y* (Fig. 7), I lay a rope, behind which the staves *i* are set, and on top of the cakes I place the barrel head *h*. The whole is held under pressure by means of a hand screw or other pressure device. When all the staves are in position a barrel hoop is driven down over the same. The inner portion of the staves extending above the bottom *h* are then secured by nailing a band onto the same all around. This band holds the bottom down and secures all the parts together, the same nails being driven through a band applied outside. The rope is then released and laid tightly around the lower end of the barrel or hogshead (by means of a rod). The barrel or hogshead may now be turned over in order to allow the lower bottom to be fastened in the same manner as the upper head. The cross pieces on the lower bottom leave room for an inner binding band on the staves. The lower bottom *h'* with the cross pieces is only a preliminary one, therefore, and may be always employed again. It is taken off and the proper bottom inserted and secured by means of an outer and inner binding band. The barrel or hogshead is now ready.

I may here add that in the arrangement as shown in Fig. 8 or 10, the support *a* which merely serves to place the rings or hoops *c* at a convenient height, may also be dispensed with and the hoops made of a correspondingly greater height, as by raising the plate *b* the packing may be done at the top without requiring the packer to stoop down into the hoop. Also by making the hoops adjustable to be given different diameters I may make barrels or hogsheads of any desired circumference.

The following is of great importance: The contents of the hoops given a first pressure within the latter may be given a finishing pressure in a hydraulic press without any inclosing ring. The tobacco will bulge out very little on the sides even when in layers of about three feet or more in thickness, as one bundle will hold the other, and one leaf will not let the other go. The tighter they are pressed the stronger they will be held in position.

A press without an inclosing ring and consisting substantially merely of a ram and plate is the most simple form of hydraulic tobacco press imaginable. It is also important that I am enabled to regulate the pressure in the finished barrels or hogsheads, as follows:—

If I want strongly pressed barrels or hogsheads, I subject the cakes to a very strong pressure, by means of a hand screw or other means, below the last barrel bottom or binding band, so that the tobacco will be forced as tightly as possible between the two barrel bottoms or heads. On the other hand, if I allow the cakes, without applying pressure to recover from the hydraulic pressure, they will gradually swell out again and will not become too hard, which is very important in certain kinds of tobacco. If, however, the barrel or hogshead is to be very tightly pressed, I give it a strong pressure with the second barrel bottom. A difference of two or three inches, in this case, tells materially.

I do not under all circumstances require a hydraulic press. I may give the cakes within the hoops or rings a sufficiently strong pressure by other means, so that they will remain together and will be capable of being taken off the plates and put into the shape of barrels when piled on top of each other. This will give the barrel a sufficient pressure such as heretofore customary, while some kinds of tobacco had better be subjected to hydraulic pressure.

When the inclosing ring is dispensed with the press will be considerably cheaper. If I am enabled to dispense with the hydraulic press, altogether the first cost of a plant will be so small as not to come into account at all.

I claim as my invention—

The mode herein described of packing leaf tobacco and the like, consisting in first packing the same in layers in detachable rings or hoops and pressing the tobacco therein, then removing the tobacco and piling the pressed cakes one on top of the other to the desired quantity and building a barrel or hogshead or similar inclosure around them, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODOR GIBON.

Witnesses:
A. MENKE,
C. WEYLAND.