

UNITED STATES PATENT OFFICE.

HENRY SHRADER, OF BURNSVILLE, ALABAMA.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 19,821, dated March 30, 1858.

To all whom it may concern:

Be it known that I, HENRY SHRADER, of Burnsville, in the county of Dallas and State of Alabama, have invented certain Improvements in the Press used for Pressing Cotton and for other Purposes; and I hereby declare the following to be a true and exact description thereof, reference being had to the drawings herewith presented, which drawings constitute a part of said description, to wit:

Figure 1 is a front view. Fig. 2 is a side view of the same. Fig. 3 is a horizontal section of the racks and pinions.

A A is the frame. B B are the braces. C is the cap or beam to which the braces are jointed. R and R are two double racks, to which both braces are connected by the head H of the racks shown in Fig. 1. L is a shaft, on which is fastened the pinion P'. This gears into the two racks seen at Fig. 3. There are shown also the three pinions, P, P, and P. These gear into the opposite sides of the racks. The pinions are all connected by larger wheels, W, which are fastened on the top of each pinion. (Seen in Fig. 1 and marked W.)

The nature of my improvement consists, principally, in the construction and combination of the several parts in a peculiar manner, by which means I obtain a more economical machine, both in the first cost and also in the power required to perform the work. It may be remarked that toggle-joint braces have been used before, and in that case they were drawn up by screws, which is a more slow way, and is subject to more friction than is encountered with the racks. While the screw is a more costly article to make than the racks, which may be cast complete ready for use, and are worked with more facility, these racks have two pinions each, which, gearing into opposite sides, serve as guides to keep the racks in place and avoid the friction that would be occasioned by the crowding back the racks if

used with a single pinion in each. By this construction I get double the power on each rack, while I have all the facility and dispatch attendant on the quick movement of the rack over the slow movement of the screws. It may also be noticed that the pinions and racks are supported on the cross-bar T, and the upper braces, B B, by being drawn together, push up the cap C, which is connected by the screw-rods S S to the sill or bottom plank of the press, and brings it upward while the lower braces are forcing down the top follower, so that when the bale of cotton is properly compressed it has arrived at the top of the box Y, and is in the right position for putting on the bands and sewing the bagging. The toggle-levers, at their lower ends, are connected together by a hinge, Z, which is also attached to the follower Z', and serves to keep steady and parallel the follower while in operation, as well as to strengthen the connection between the lower ends of the levers.

I do not claim the use of racks, as they have been heretofore used, neither do I claim the toggle-joints; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction and combination of the double racks with the toggle-joints, as above described, for the purpose above explained, and in the manner as set forth.

2. The hinge connecting the lower ends of the toggle-levers with the follower, in combination with the operation of the levers, as described, by which both followers are operated at the same time and with the same application of power.

In testimony whereof I hereto set my name in presence of two witnesses.

HENRY SHRADER.

Witnesses:

W. R. COLLE,
THOS. S. TAYLOR.