My present invention has for its object the provision of a simple and highly efficient laundry flat rack.

The improved rack, while intended for general use, is especially well adapted for use in connection with the laundry flat piece spreader and carrier disclosed and broadly claimed in my copending application executed of even date herewith. In this use of the improved rack, sheets, table cloths and other large flat pieces are successively drawn by the carrier over the spreader and then deposited in a pile on the rack. When the rack is loaded the same is used as a truck to convey the pile of flat pieces thereon to a flat piece ironer where they are successively fed thereto.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a perspective view showing the improved rack positioned in front of a flat piece ironer fragmentarily illustrated;

Fig. 2 is a view of the improved rack in transverse vertical section, on an enlarged scale, some parts being shown in different positions by means of broken lines, and further illustrating a flat piece on the rack;

Fig. 3 is a fragmentary detail view with some parts sectioned on the irregular line 2—3 of Fig. 2;

Figs. 4 and 5 are fragmentary detail views with some parts sectioned on the lines 4—4 and 5—5, respectively, of Fig. 2; and

Fig. 6 is a view corresponding to Fig. 2, but showing a slight modification of the rack and with the bottom portion of the rack broken away.

Referring first to the invention, as shown in Figs. 1 to 5, inclusive, the body of the rack is a rectangular skeleton structure which includes cast H-shaped end members 7, each of which comprises a relatively short front leg 8, a relatively long rear leg 9, and a cross-tie member 10. The two front legs 8 are rigidly connected by upper and lower longitudinal tie-rods 11 and the two rear legs are similarly connected by upper and lower cross-tie rods 12. As shown, these cross-tie rods 11 and 12 are in the form of pipes having threaded ends which extend through bossed holes in the legs 8 and 9 and are rigidly secured thereto by opposing nuts 13, see Fig. 5. It will be noted that the cross-tie rods 11 and 12 are located at different elevations and that the uppermost thereof are the same distance below the upper ends of the legs 8 and 9.

A rock-shaft 14 is carried from the upper end portions of the front legs 8 by bearing 15 which include screws 16 having conical ends that extend into correspondingly formed seats in the heads of screws 17 turned into the ends of the rock-shaft 14 which, as shown, is a pipe. The screws 16 have threaded engagement with bossed holes in the upper end portions of the short legs 8 and are held by lock nuts 18 from turning, see Fig. 4. By adjusting the screws 16 their opposing impinging force applied at the ends of the rock-shaft 14 will frictionally hold the same from turning except when manual force is applied thereto, as will presently appear.

A pair of relatively long radial arms 19 are rigidly secured to the rock-shaft 14 at the ends thereof and which arms are rigidly connected at their outer ends by a cross-tie pipe which affords a flat piece-supporting member 20. The length of the arms 19 is such that they can not swing by the top tie rod 11 but may be turned into the body of the rack to carry the supporting member 20 below the rock-shaft 14, as indicated by broken lines in Fig. 2.

A windlass 21 is carried from the upper ends of the rear legs 9 by bearings 22 which, as shown, are like the bearings 15. This windlass 21 is made up of a pair of diametrically opposite parallel pipes, each of which affords a flat piece-supporting member 23 mounted in the outer ends of a pair of radial arms 24 having outwardly projecting short tubular trunnions 25. The two arms 24 at each end of the windlass 21 are integrally formed and the screws and lock nut comprising each bearing 22 are indicated by the numerals 26, 27 and 28, respectively.
2 screws 27 are turned into the outer ends of the trunnions 25, see Fig. 2. It will be noted that the arms 24 are much shorter than the arms 19 and permit the windlass 21 to be operated to make complete rotations above the upper tie-rod 12. The windlass 21 is frictionally held where set by its bearings 22 in the same manner that the rock-shaft 14 is held by its bearings 15.

Within the body of the rack is a basket Z formed by a single piece of canvas having on its longitudinal edges loops through which the lower tie-rods 11 and 12 are inserted and from which rods the basket Z is supported.

The legs 8 and 9 are provided with castors 28 which permit the rack to be used as a truck for transporting flat pieces X, such as sheets, table cloths, and the like, one of which is shown in Fig. 2, from place to place. For instance, from a spreader and conveyor to a flat piece ironer, as indicated in Fig. 1, and which ironer is designated as an entirety by the letter Y.

It will be noted that the ratio of the arms 19 and 24 is such that when said arms are in upright positions the supporting member 20 and the uppermost supporting member 23 are at the same elevation. The supporting member 20 and windlass 21 hold the flat piece X spread thereon at its intermediate portion with the side portions thereof hanging down at the front and back of the rack.

When the rack is positioned under a conveyor to receive and hold flat pieces successively piled thereon by the conveyor as they are drawn over a spreader the supporting member 20 and windlass 21 are adjusted, as shown in Fig. 2.

If a wider supporting surface for the flat piece X is desirable the windlass 21 may be turned in a horizontal position so that said load rests on both the supporting members 23. The rack when loaded with flat pieces piled thereon may be moved and used as a truck to convey the load to a flat piece ironer Y and before the same is positioned in feeding relation thereto the rock-shaft 14 is turned by manual force applied to either one of the arms 19 or the supporting member 20 to swing said arms inward and carry the supporting member 20 downward below the rock-shaft 14 to deposit the load thereon, as indicated in Fig. 1. This adjustment of the supporting member 20 lowers the front of the rack and permits the same to be positioned under the flat piece ironer Y. With the rack thus positioned the windlass 21 may be manually turned to feed the load thereon into the rack and raise the respective longitudinal edge portions of the flat pieces thereon so that they may be easily reached and facilitate the feeding thereof to the flat piece ironer Y.

The basket Z prevents the flat pieces from coming in contact with the floor and sustains part of the load when resting thereon, as shown by broken lines in Fig. 2.

Referring now to the modification shown in Fig. 6, the body of the rack 29 is the same as that shown in Fig. 2 with the exception that the legs 30 and 31, which are rigidly connected by a cross-tie member 32, are all of the same length and that the two top tie-rods 33 and 34 are at the same elevation.

The basket, which is identical with the basket Z, is indicated by the numeral 35.

A rock-shaft 36 is carried by each pair of legs 30 and 31 and mounted at its ends in bearings, not shown, of the same type as that designated by the numeral 15. On each rock-shaft 36, at the ends thereof, is rigidly secured a pair of radial arms 37 which carry a windlass 38 that is identical with the windlass 21 and mounted in bearings, not shown, like the bearings 22. In this construction when positioning the rack in respect to the flat piece ironer, either pair of arms 37 may be turned down to permit the respective side of the rack to be moved under the ironer so that the rack does not have to be turned around.

What I claim is:

1. A rack of the class described comprising a body having a supporting member and a windlass laterally spaced from each other to hold a flat piece spread thereon at its intermediate portion with its side portions hanging down therefrom, said windlass being operable to feed the respective portion of the flat piece supported thereon in respect to the supporting member.

2. The structure defined in claim 1 which further includes means for holding the windlass from turning under its own weight or that of the load it sustains.

3. The structure defined in claim 1 which further includes adjustable friction means for holding the windlass from turning under its own weight or that of the load it sustains.

4. The structure defined in claim 1 in which the supporting member is mounted for raising and lowering movements.

5. A rack of the class described including a body, a horizontal supporting rail having a pair of arms pivoted to the body and supporting said rail for raising and lowering movements, a windlass mounted on the body, said supporting rail and windlass being laterally spaced from each other to hold a flat piece spread thereon at its intermediate portion with its side portions hanging down therefrom, said windlass being operable to feed the respective portion of the flat piece supported thereon in respect to the supporting member.

6. A rack of the class described including a body having relatively short front legs and relatively long rear legs, a horizontal supporting rail having arms pivoted to the short legs, and a windlass mounted on the long legs, said rails and windlass being laterally spaced.
from each other to hold a flat piece spread thereover at its intermediate portion with its end portions hanging down therefrom.

7. A rack of the class described comprising a body having a pair of laterally spaced windlasses mounted thereon and laterally spaced from each other to hold a flat piece spread thereon at its intermediate portion with its side portions hanging down therefrom.

8. A rack of the class described comprising a body, two pairs of arms pivoted to the body, a windlass carried by each pair of arms, the two windlasses being laterally spaced from each other to hold a flat piece spread thereon at its intermediate portion with its side portions hanging down therefrom, and means for holding each pair of arms turning under the weight of the windlasses and the load sustained thereby.

In testimony whereof I affix my signature.

LEE R. SAGER.