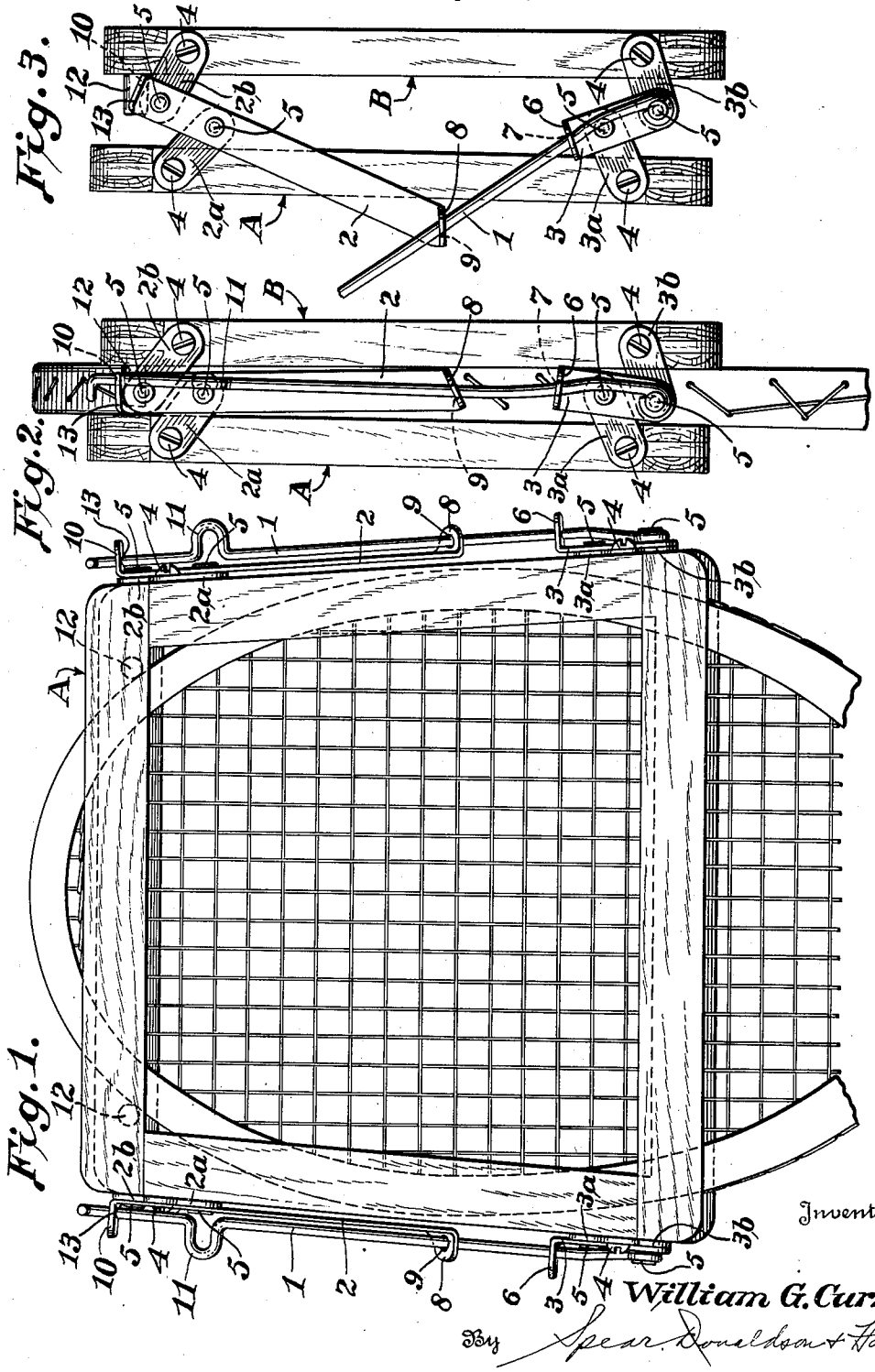
July 25, 1939. W. G. CURRY 2,167,560

RACKET PRESS

Filed Sept. 24, 1937



Inventor:
William G. Curry,
By Spear, Donaldson & Hall
Attorneys.

Patented July 25, 1939

2,167,560

UNITED STATES PATENT OFFICE

2,167,560

RACKET PRESS

William G. Curry, Springfield, Mass., assignor to A. G. Spalding & Bros., New York, N. Y., a corporation of New Jersey

Application September 24, 1937, Serial No. 165,596

21 Claims. (Cl. 273—74)

The invention is a racket press and has for an object the provision of means for connecting and operating the upper and lower clamping members which may be readily manipulated by both hands simultaneously by lever means without the use of clamping screws, and so constructed and multiplied that the racket frame is held rigidly under stress.

Another object is to provide a racket press construction in which clamping stress is provided by the spring character of the operating lever means.

Other objects will appear hereinafter.

The invention consists in the features, combination and arrangement of parts as hereinafter described and as particularly pointed out in the claims.

In the drawing:

Figure 1 is a plan view of the press, in closed position, on a racket frame shown in dotted lines.

Fig. 2 is a side view of the press closed on a racket frame.

Fig. 3 is a side view of the press in open position.

Referring to the drawing 1 represents the operating levers or members which are of spring character, and in the embodiment shown are of round spring wire. The spring operating levers 1 cooperate with the longitudinally extending levers or connecting members 2 and 3, which in turn are connected by links 2*a*, 2*b*, 3*a*, 3*b* to upper and lower clamping members or frames A and B.

Links 2*a*, 2*b*, 3*a*, 3*b*, are secured at their outer ends to the clamping frames A and B by means of screws 4 or the like. The inner ends of the links are pivotally secured at spaced apart points on the substantially longitudinally extending levers or connecting members 2 and 3, by means of rivets 5 or the like.

The links 2*a* and 2*b* are disposed in substantially parallel relation to each other as also are the links 3*a* and 3*b*. The sets of links 2*a*, 2*b* and 3*a*, 3*b* as shown may be inclined in opposite directions in their plane.

The rivet 5 pivotally connecting link 3*b* with connecting member or lever 3, also serves as the pivotal mounting for the spring operating rod or lever 1, as shown, the rivet being disposed at the outer end of the member 3.

The inner end of the lever or member 3 which is of flat metal is turned outwardly to provide flange 6 having an opening 7 to receive the operating rod or lever 1. The inner end of the flat metal connecting member or lever 2 is likewise turned outwardly providing flange 8 having an opening 9 to receive the operating rod 1.

The opening 7 is preferably in the form of a somewhat elongated notch or slot which will permit of some lateral outward movement of the spring operating lever 1 relative to the short lever or member 3. The lever or member 2 is considerably longer than the lever 3 and the inner end of the member 2 extends to and somewhat beyond the midpoint of the side of the press. It is capable of flexing outwardly with the spring lever 1 in locking or unlocking the press, the locking means for which comprises a projection or catch 10 on the outer end of the member 2 to engage and retain the free end of the spring lever 1.

The spring lever 1 is preferably bent as shown in its engagement with the rivet 5 and in extending along the member 3 and then through openings 7 and 9 of the members 3 and 2 so as to exert stress when engaged by the catch in operating the press on a racket frame. A finger hold 11 may also be provided on the spring rod 1 as by bending the rod laterally.

In operation, the operating levers may be pushed downwardly to release them from the catches 10 by both hands simultaneously, then flexed outwardly to clear the catches, and are then raised upwardly. In so doing the connecting members or levers 2 and 3 are swung upwardly about their pivots on the lower links 2*b* and 3*b*, and the upper links 2*a* and 3*a*, which are pivotally connected to the levers or members 2 and 3 inwardly of the pivots of the members, are pushed upwardly, thus separating the upper and lower clamping frames A and B.

In swinging upwardly, the operating rod engages the inner ends of the levers or connecting members 2 and 3 by contacting the walls of their openings 7 and 9, the operating rod 1 in raising the longer connecting member or lever 2 and thereby inclining it oppositely, having relative sliding movement through the opening in the end of the member 2. The reverse of this action takes place in closing the press.

A racket is then inserted in the open press with the upper end of the racket frame engaging the stop pins 12 to center the same. With the racket in position, the hands at either side of the press simply depress the spring levers 1 which cam outwardly over the rounded outer edge 13 of the projection or catch 10 causing them to spring inwardly and then upwardly into locking engagement with the catch with the press closed in operative engagement with the racket frame.

In depressing the spring levers to clamp the racket they are flexed downwardly about their points of engagement with the lower edge or wall of the openings 7 in the short levers or members 3. The racket frame is thus held between the clamping members A and B under stress of the flexed spring levers 1, retained by catches 10 and flexing over the inner ends of the short connecting members or levers 3, as fulcrums, the levers 3 being fixed in position as determined by the racket frame between the clamping members A and B.

It will be seen that the structure involves spaced apart connections between the upper and lower clamping members at each side thereof and operating means at each side of the press for operating the connections, including spring members and catch members for maintaining said spring member under stress when the press is closed, and I do not limit myself to the specific form or arrangement of the element just mentioned as disclosed herein, the scope of said organization being defined by the appended claims. The spaced apart connections above referred to may be termed linkage connections, and, as is readily apparent, include the links such as 2*a* and 2*b* with the interposed lever or connecting member 2, or the links 3*a* and 3*b* with the interposed levers or connecting member 3.

I claim:

1. In combination in a racket press, upper and lower clamping members, linkage connections extending between and connecting said members at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and manually operable levers, one on each side of the press and operatively connected to the spaced apart sets of linkage connections, said manually operable lever on each side extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage connections simultaneously, in opening or closing the press.

2. In combination in a racket press, upper and lower clamping members, linkage connections between them at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and a manually operable lever on each side connected to the spaced apart sets of linkage, said manually operable lever extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage simultaneously, in opening or closing the press, each of said sets of linkage connections including a pair of substantially parallel link members pivoted respectively to the upper and lower clamping members with a connecting member between their inner ends extending in a general direction lengthwise of the side of the press, said manually operable lever engaging the adjacent ends of said longitudinally extending connecting members for operating said connecting members together with the said links pivoted thereto.

3. In a racket press, upper and lower clamping members, spaced apart sets of linkage connections between them at each side of the press, and means for operating the linkage connections including spring lever members and catch means for maintaining said spring lever members under stress when the press is closed.

4. In combination in a racket press, upper and lower clamping members, linkage connections between them at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and a manually operable lever on each side connected to the spaced apart sets of linkage, said manually operable lever extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage simultaneously, in opening or closing the press, one set of linkage at each side of the press being provided with a projection or catch member to be engaged by the manually operable lever to hold the same with the press closed.

5. In combination in a racket press, upper and lower clamping members, linkage connections between them at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and a manually operable lever on each side connected to the spaced apart sets of linkage, said manually operable lever extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage simultaneously, in opening or closing the press, the said manually operable levers being of spring character to snap under a catch or projection for holding the press closed.

6. In combination in a racket press, upper and lower clamping members, linkage connections between them at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and a manually operable lever on each side connected to the spaced apart sets of linkage, said manually operable lever extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage simultaneously, in opening or closing the press, the said manually operable levers being of spring character to snap under a catch or projection for holding the press closed, said manually operable levers having capacity to move laterally towards and from the side of press for locking or unlocking.

7. In combination in a racket press, upper and lower clamping members, connections between the clamping members, spring levers for operating the connections to open or close the press, and catch means for retaining the spring levers under stress in closed position of the press.

8. In combination in a racket press, upper and lower clamping members, connections between the clamping members at forward and rear portions of the sides of the press, and a spring lever extending along each side and connected with both the forward and rear connections for operating the same simultaneously to open or close the press, and retaining means for holding the spring levers in operating position under stress.

9. In combination in a racket press, having upper and lower clamping members, a pair of levers extending longitudinally on each side of the press, said levers having inner free ends extending toward each other and having their outer ends pivoted to links connected to the upper and lower clamping members of the press, openings in the inner ends of said levers, and an operating rod pivotally mounted at one end to one of said levers and extending through the opening therein and through the opening in the other of

said levers to operate the levers to open or close the press.

10. Apparatus according to claim 9 in which said links are connected to said levers at spaced points on the levers to open or close the press by turning the levers by said operating rod to move the links apart.

11. Apparatus according to claim 9 in which said last mentioned lever is longer than the first mentioned lever, said longer lever extending beyond the midpoint of the side of the press.

12. Apparatus according to claim 9 in which said operating rod is of spring character and retaining means for said spring operating rod to hold it in closed position under stress.

13. In combination in a racket press, upper and lower clamping members, linkage connections between them at opposite sides thereof, said linkage connections on each side being in sets spaced apart from each other and located near the end portions of said sides, and a manually operable lever on each side connected to the spaced apart sets of linkage, said manually operable lever extending lengthwise of the side of the press and movable in a plane substantially parallel with the side of the press for operating the said sets of linkage simultaneously, in opening or closing the press, said manually operable lever being pivotally mounted on one set of linkage and extending with its free end to the other set of linkage on the same side of the press, said other set of linkage having a catch member for engaging the said free end of the lever.

14. Apparatus according to claim 1 in which said links are of flat metal and said manually operable levers are of spring wire.

15. Apparatus according to claim 2 in which said connecting members are of flat metal having turned ends provided with openings to receive the manually operable lever.

16. Apparatus according to claim 9 in which said last mentioned lever is provided with a catch or projection at its outer end to retain the operating rod, said operating rod being of spring character and being retained by said catch under stress in operating position, the inner end of the first mentioned lever serving as a fulcrum for said spring rod when stressed.

17. Apparatus according to claim 9 in which said operating rod is of spring character and is bent at an angle intermediate its length, and catch means to be engaged by said operating rod to retain it in operating position under stress.

18. Apparatus according to claim 9 in which said operating rod is of spring character and is bent at an angle intermediate its length, and catch means to be engaged by said operating rod to retain it in operating position under stress, said operating rod being provided with a laterally extending portion to serve as a finger hold.

19. Apparatus according to claim 9 in which said links at the outer end of each of said levers comprise a set of substantially parallel links, said sets of substantially parallel links on each side of the press being inclined in opposite directions.

20. Apparatus according to claim 9 in which said last mentioned lever is longer than the first mentioned lever, said longer lever and said operating rod having relative sliding movement in the opening and closing of the press.

21. Apparatus according to claim 1 in which said manually operable lever on each side of the press has a relatively slidable connection by extending through an opening in a portion of one of said sets of linkage connections.

WILLIAM G. CURRY.