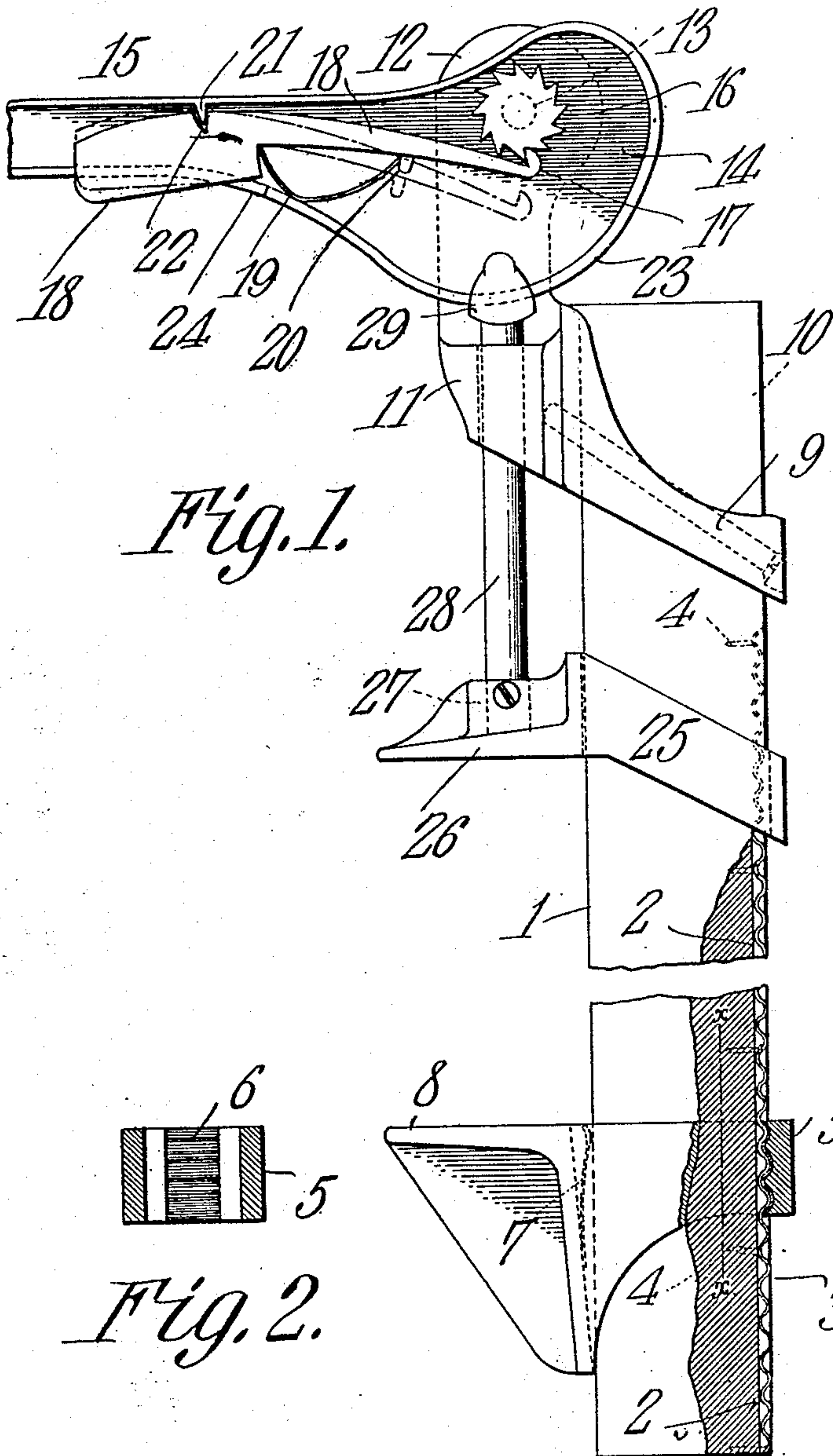


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PATENTED MAR. 10, 1908.

E. BARKER.
GLUING CLAMP.

APPLICATION FILED APR. 5, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EUGENE BARKER, OF BATAVIA, NEW YORK.

GLUING-CLAMP.

No. 881,530.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed April 5, 1907. Serial No. 366,600.

To all whom it may concern:

Be it known that I, EUGENE BARKER, a citizen of the United States, residing at Batavia, in the county of Genesee and State of New York, have invented a new and useful Gluing-Clamp, of which the following is a specification.

This invention relates to gluing clamps such as used by cabinet makers and others for holding together parts to be glued.

The invention is particularly designed for use in connection with large articles such as tables, desks, and in fact anything of large proportions made up of parts which it is desired to clamp together until the glue has hardened.

Experience has disclosed the fact that the ideal means for adjusting the jaw of a work clamp consists of a cam which by a slight movement in one direction will impart the proper movement to the jaw, but obviously such a device can not be used where a long movement of the jaw is necessary, as with a grooved wooden bar, because if a cam with a long throw should be utilized it would not remain in adjusted position but would be moved backward by the pressure exerted thereagainst during the clamping action.

One of the objects of the present invention is to provide a gluing clamp utilizing a wooden bar having simple and efficient means whereby a minute adjustment of the loose jaw may be effected and the use of a large cam permitted for any adjustment of the other jaw which is necessary.

A still further object is to provide a novel form of adjusting cam having simple and efficient means whereby the cam can be securely locked in any position to which it may be shifted, said locking means being so positioned that the same can be promptly released by a pressure from the hand grasping the cam. One hand of the operator is thus left free during the actuation of the cam, to grasp the work and hold it while the clamp is being released.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is an elevation of a gluing clamp embodying the present improvements, the locking member of the cam

being shown by dotted lines disengaged; and Fig. 2 is a transverse section through the loose jaw on line $x-x$, Fig. 1.

Referring to the figures by characters of reference, 1 designates a wooden bar of any suitable proportions in one face of which is formed a longitudinal groove 2 in which is secured a rack 3 of novel form. This rack consists of a strip of sheet metal of approximately the same width as the groove 2 and this strip is corrugated or crimped transversely by running it between corrugated rollers. The rack is fastened within the groove in any desired manner as by means of nails or screws 4 which are driven there-through and into the bar 1.

Slidably mounted on the bar 1 is an angular sleeve 5 having teeth 6 projecting from the inner face of that portion thereof extending across the groove 2. These teeth are held normally in engagement with the corrugated strip 3 by means of a spring 7 connected to the opposite face of the sleeve and constantly bearing against the bar 1 as shown in Fig. 1. A jaw 8 is formed integral with that wall of the sleeve from which the spring extends.

A metallic collar 9 is arranged diagonally around one end portion of the bar 1 and is preferably immovably secured in place by means of a screw, pin or other suitable fastening device extending through the bar and into the collar. This collar has a guide extension 11 from which extends an arm 12 projecting beyond the end of the bar 1. A stud 13 extends from this arm and constitutes a bearing for a cam 14 formed at one end of an actuating lever or handle 15. A ratchet wheel 16 is formed with or secured to one end of the stud 13 and is therefore held against rotation. This wheel is normally engaged by a head 17 formed at one end of a lever 18. This lever is pivotally mounted upon the handle 15 and is held with its head 17 normally in engagement with the wheel 16, by a spring 19 which is held in contact with the lever by means of a retaining lug 20. The lever 18 is preferably fulcrumed upon a projection 21 which extends loosely into a notch 22 formed within the lever but it is of course to be understood that any other desired means may be utilized as a fulcrum for the lever. The cam has a flange 23 extending from the edge thereof and a portion of this flange is removed, as shown at 24, to permit the free end of lever 18 to project normally beyond

the handle 15. It is obvious that with this construction the operator can grasp the handle 15 to operate the cam and by tightening his grip on the handle he can draw the free end of lever 18 into the handle as shown by dotted lines and thereby release the head 17 from wheel 16 and permit the cam to be easily swung in either direction.

A sleeve 25 is slidably mounted on the bar 1 between sleeve 5 and the collar 9 and this sleeve, like the collar 9, is preferably diagonally disposed so that the same can be adjusted against the collar and will automatically clutch the bar 1 when pressure is exerted against a jaw 26 which is integral with and extends from the sleeve 25. This jaw has a socket 27 in which is secured one end of a plunger 28 slidably mounted within the extension 11 and having a head 29 which loosely engages the flange 23 of cam 14.

When it is desired to use the clamp the locking lever is disengaged from the ratchet wheel in the manner described and the cam is partly rotated so as to draw the plunger 28 longitudinally and carry the jaw 26 close to collar 9. The jaws 26 and 8 are then placed at opposite sides of the object or objects to be clamped and jaw 8 is adjusted as close as possible to the object. The teeth 6 can of course be slipped over the corrugated strip 3 simply by pressing against the spring 7. As soon as the spring is released it will return the teeth into engagement with the strip 3 and the jaw will therefore be held against movement. As soon as this adjustment has been effected the handle 15 is swung toward the work and the cam 14 presses jaw 26 tightly against the work. Return movement of the cam is prevented because the lever 18 engages ratchet wheel 16. The work will thus be tightly clamped between the jaws and can be placed in a stack with other clamped work without danger of any of the work becoming scratched or marred by the bars 1. It will be seen that the clamping action can be very quickly effected by one movement of the handle 15 and the clamp can be as quickly disconnected from the work simply by drawing the lever into the handle to release it from the stationary ratchet wheel 16 and at the same time pulling upward or outward upon the handle to

draw the plunger 28 and its jaw 26 away from the jaw 8. As has heretofore been stated the release and actuation of the cam can be effected simultaneously by one hand of the operator so that the other hand is free to hold the work when the clamp is removed from it.

What is claimed is:

1. The combination with a bar having a jaw slidably mounted thereon; of a collar upon the bar, a guide extension integral therewith, an arm extending from said extension, a stud fixedly mounted upon the arm, a ratchet rigid with the stud, a cam revolvably mounted upon the stud and between the arm and ratchet, said ratchet being disposed entirely within the edges of the cam, a push bar mounted within the guide extension and connected to the jaw, said bar being movably engaged by the cam, and means carried by the cam for engaging the ratchet to lock the cam against movement in one direction.

2. The combination with a bar, a jaw thereon, and a second jaw slidably mounted upon the bar; of a cam pivotally connected to the bar, an actuating lever extending therefrom, a continuous flange extending laterally from the edges of the cam and lever, means engaging said flange for transmitting motion from the cam to the movable jaw, a ratchet wheel fixedly disposed upon the pivot of the cam and surrounded by the flange, a projection upon the actuating lever, a locking lever interposed between the flanges and upon the actuating lever, said locking lever having a recess disposed to receive the projection, means integral with the locking lever for engaging the ratchet to hold the cam against movement in one direction, and yieldable means for holding the locking lever normally in engagement with the ratchet, one end of the locking lever projecting through the flange of the lever and constituting a grip.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EUGENE BARKER.

Witnesses:

WM. F. SALTER,
C. E. DOYLE.