

O. WERNER.
 DROP HAMMER.
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947,657.

Patented Jan. 25, 1910.

Fig. 1.

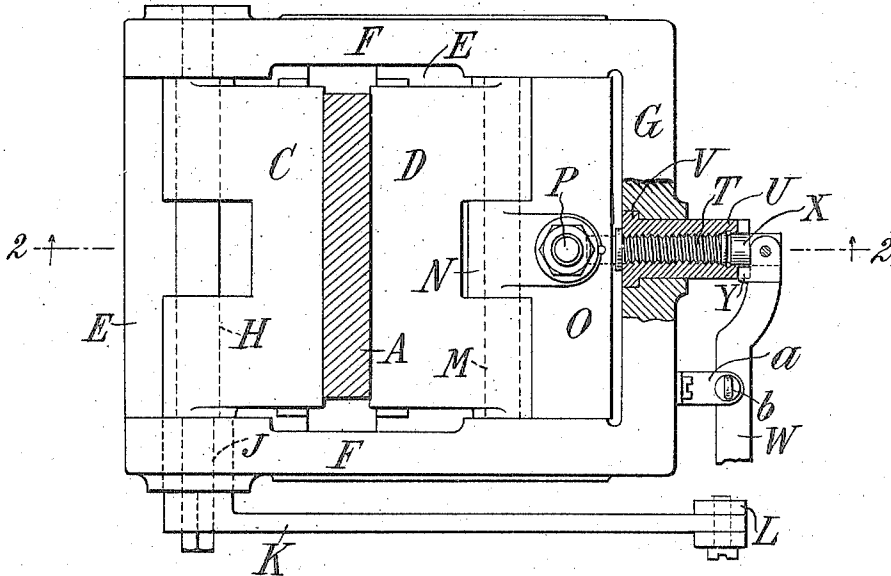


Fig. 2.

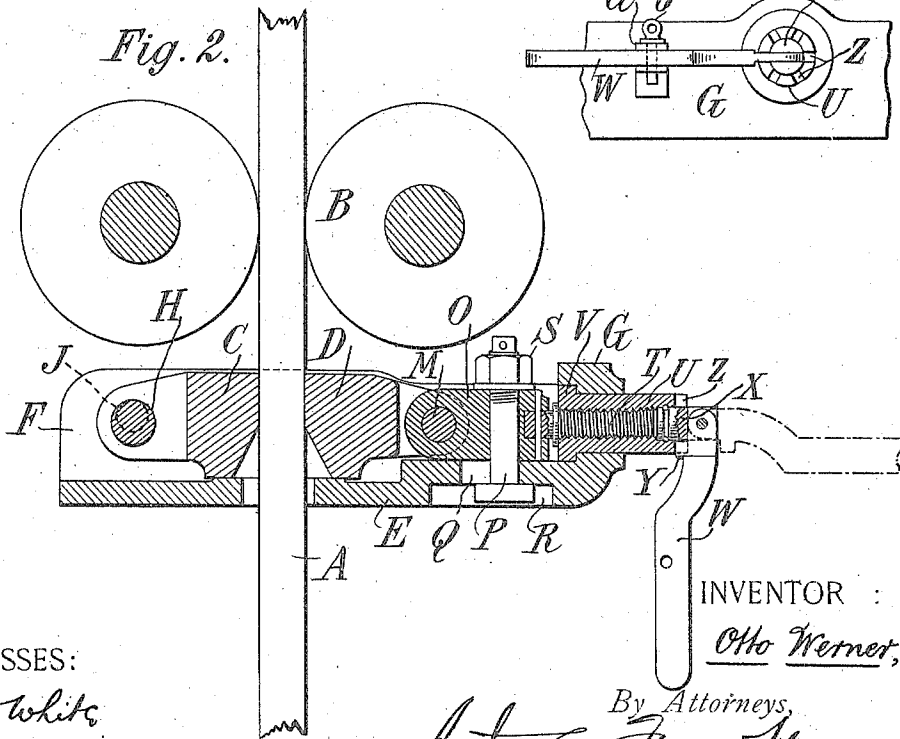
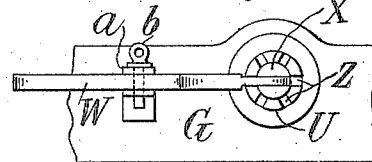


Fig. 3.



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UNITED STATES PATENT OFFICE.

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DROP-HAMMER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OTTO WERNER, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Drop-Hammers, of which the following is a specification.

This invention aims to provide certain improvements in drop hammers, especially of the type shown for example in the patent of Stiles, No. 10,324, reissued May 8, 1883, in which the hammer is raised by means of the friction of lifting rolls against a strap or bar of wood, and is lowered by releasing the strap from the rolls.

This invention is directed particularly to improvements in the clamp frame or clamp mechanism by which the strap is held lifted after the lifting rolls have been withdrawn from it, and until the clamp is tripped by the operator.

The accompanying drawings illustrate an embodiment of the invention.

Figure 1 is a plan view partly in section; Fig. 2 is a vertical section approximately on the line 2—2 of Fig. 1; Fig. 3 is an end elevation.

Referring to the embodiment of the invention illustrated, the strap A carries the hammer at its lower end and is raised by frictional engagement with the rolls B. At its high point it is clamped between the pivoted clamps C and D. The clamps and connected mechanism are mounted upon a frame having a base E which rests on top of the side frame of the machine, and having sides F and a front wall G, the base of the frame being apertured for the passage of the strap A. A movable clamp C is mounted on an eccentric central portion H of a shaft M, the end portions J of which are journaled in the side walls F of the frame, and upon one end of which is keyed an arm K, the free end of which is connected by a rod L to the mechanism below by which it is actuated. When the strap is to be clamped the movable clamp C is thrown inward by turning the eccentric in one direction. When the strap is to be released, the same clamp C is moved outward by a reversal of the eccentric. The opposite clamp D is fixed in use, but is adjustable toward and from the movable clamp C. It is mounted

on a shaft M the intermediate portion of which passes through a projecting portion N of a bracket O which is clamped upon the base E of the frame by means of a bolt P which passes through an elongated slot Q in the base, and has its head held in an oblong recess R on the under side of the base. By turning the nut S on the upper end of this bolt, the bracket O and clamp D may be held rigidly in position, the nut being slightly unscrewed to permit adjustment of the bracket and clamp; or the nut may be screwed up so tightly as to hold the clamp firmly in place against the strains of use, while at the same time permitting a slight adjustment by the mechanism hereinafter described.

For effecting the movement of the bracket O, there is provided a threaded rod T, pinned at its inner end to the bracket and projecting into an internally threaded sleeve U which is fitted rotatively in an opening through the front wall or flange G of the frame, being held against outward movement by a collar V lying in a recess in the inner side of the wall G.

The internally threaded sleeve or nut U is turned by a handle W which is permanently attached and is adapted in one position to be rotated relatively to the sleeve, and in another position to turn the sleeve to effect the required adjustments. The desired connection is made by means of a fork X which is swiveled within the end of the sleeve U and projects outwardly therefrom, and in the outer end of which the handle or lever W is transversely pivoted. The lever W is provided with a portion Y so positioned that when the lever is bent relatively to its fork, the portion Y will enter one or another of a number of notches Z in the end face of the sleeve U. Thus in the position shown in full lines in Fig. 2 the lever is engaged with the sleeve U in such a way as to turn it and adjust the bracket and clamp; while in the dotted line position the lever may be swung freely with its swivel fork X without turning the sleeve.

Preferably a fork *a* is provided at a fixed point on the end wall G of the frame in position to receive the end of the lever W when the latter is bent, and to hold the same by means of a pin *b* so as to prevent rotation of the threaded sleeve.

An adjustment will be effected by removing the pin *b*, swinging the lever *W* out to the straight position, and turning it and swinging it in again to the bent position engaging another of the notches *Z*, and then turning the handle back and fastening it in the fork *a*.

I claim as my invention:—

1. In a machine of the class described, a pair of clamps, and means for adjusting one of said clamps toward the other comprising a non-rotative threaded rod, an internally threaded sleeve engaging said rod, and a handle attached to said sleeve with a swivel joint to permit it to be turned to different positions relatively to said sleeve, and means for bringing said handle in engagement with said sleeve to permit the turning of the sleeve by the handle.
2. In a machine of the class described, a pair of clamps, and means for adjusting one of said clamps toward the other comprising a non-rotative threaded rod, an internally threaded sleeve engaging said rod, and a handle attached to said sleeve with a swivel joint to permit it to be turned to different positions relatively to said sleeve, means for bringing said handle in engagement with said sleeve to permit the turning of the sleeve by the handle, and means for fastening said handle when in such engage-

ment with the sleeve so as to prevent the turning of the handle.

3. In a machine of the class described, in combination, a pair of clamps, a base *E* carrying said clamps, a bracket *O* attached to one of said clamps, a threaded rod *T* non-rotatably attached to said bracket, a rotatable sleeve *U* threaded on said rod *T* and held against longitudinal movement relatively to said base, and means for turning said sleeve.

4. In a machine of the class described, in combination, a pair of clamps and means for adjusting one of said clamps toward the other including a non-rotative threaded rod *T*, a rotatable sleeve *U* threaded on said rod *T*, a swivel fork *X* in the end of said sleeve *U*, a handle *W* pivoted in said fork and having a portion *Y*, said sleeve *U* being provided with notches *Z* in which said portion *Y* is adapted to enter when the handle is bent but from which said portions *Y* are free when the handle is straight.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

OTTO WERNER.

Witnesses:

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F. C. FLADD.