

J. D. LORANGER.
DOLLY BAR.
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1,276,235.

Patented Aug. 20, 1918.

Fig. 1

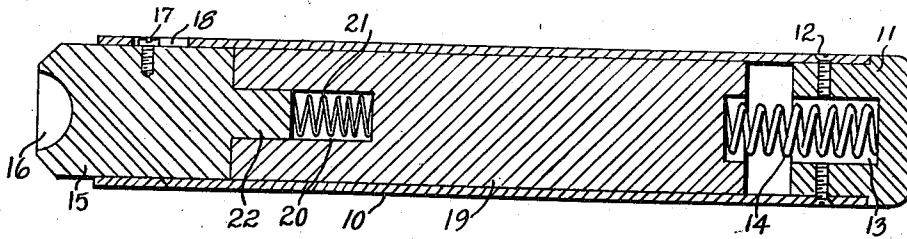


Fig. 2

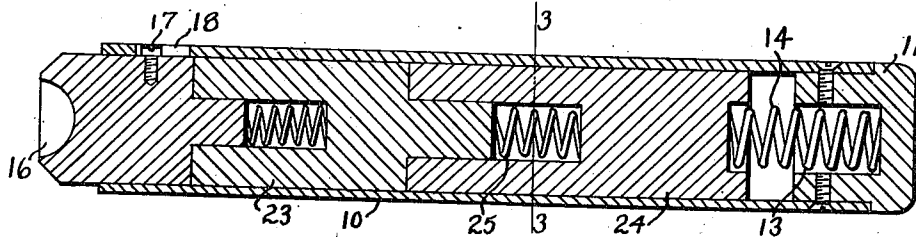
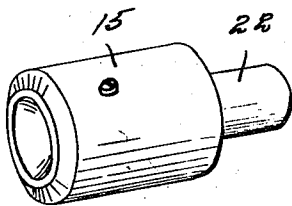


Fig. 4

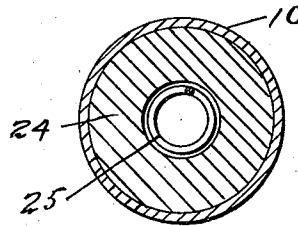


Fig. 3

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DOLLY-BAR.

1,276,235.

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To all whom it may concern:

Be it known that I, JOSEPH DONAT LORANGER, a subject of the King of England, and resident of Central Falls, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Dolly-Bars, of which the following is a specification.

This invention relates to dolly-bars of the class employed for holding or backing-up the heads of rivets while the opposite ends of the rivets are being headed-over onto the work.

It is found in practice that constant action of the blows of a riveting hammer, of either the pneumatic, electric or even the hand type of hammer upon the ordinary dolly-bar, is not only extremely tiring but often seriously affects the health of the workman who is obliged to hold this bar for any considerable length of time against such hammer action.

It is also found in practice that a workman, in order to support the ordinary heavy dolly-bar accurately in position, must use both hands and apply considerable pressure thereto.

The object of my invention is to provide a spring or cushion type of dolly-bar having an outer casing or sleeve which may be engaged by both of the hands of the operator, and to mount a cushioned inertia-block within the sleeve for the purpose of receiving the direct action of the hammer blows without transmitting the shocks to the person of the workman, thus relieving him from the injurious effects of such continuous vibrations.

Another feature of my invention is that by the particular arrangement of my springs or cushions, the tension of the springs may be nicely regulated by the hand pressure of the operator upon the dolly against the rivet, so that the inertia-block together with the anvil-block, will return and strike a counter blow on the rivet-head at exactly the same time that the riveting blow of the hammer is delivering its blow on the opposite end of the rivet, thereby rendering the riveting action doubly effective.

A still further object of this invention is to so arrange the springs or cushions that they will act upon the anvil block, to quickly return it into engagement with the head of the rivet, thereby effectually pre-

venting missing the head, which is often the case where the operator is handling the heavier type of solid bar as the return action of such a bar is necessarily slow when depending entirely upon the muscular action of the workman.

The repeated missing of a rivet-head is considered a very serious objection as such an action causes the rivet to be spoiled by the next succeeding blow of the hammer, and must then be drilled or driven out causing annoyance, loss of time and unnecessary expenditure of labor.

Owing to the particular arrangement of parts my improved dolly-bar is much more effective than the ordinary bar of this character.

Another feature of importance in my improved bar is that it may be made from one-third to one-half lighter in weight than the old style of bar, and therefore, even an inexperienced workman can use this light bar effectively, while the use of the old type of heavier bar requires the service of a man who is not only experienced, but one who is very strong, in order to handle it effectively for any considerable length of time.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1— is a sectional side elevation of one form of my improved dolly-bar showing the anvil-block and the inertia-block slidably mounted in the sleeve.

Fig. 2— is a sectional side elevation showing a modified form of dolly-bar in which an inertia-block of a double construction is mounted within the sleeve.

Fig. 3— is an end section on line 3—3 of Fig. 2.

Fig. 4— is a perspective view of the anvil-block.

Referring to the drawings, 10 designates the sleeve or tubular member of my dolly-bar, in the outer end of which is secured the head 11 by means of the screws 12. This head is recessed on its inner face, as at 13 for the reception of the comparatively heavy spring 14 which acts upon the inertia-block, presently described.

In the opposite end of this sleeve is slidably mounted the anvil-block 15, the outer

end of which is recessed at 16 to receive the head of the rivet. This block is prevented from being removed entirely from the sleeve by means of the guide screw 17 which slides in the slot 18 in the sleeve.

Between this anvil-block and the head is slidably mounted a so-called inertia-block 19 which is relatively massive and is designed to indirectly receive the blows of the riveting hammer.

In order to cushion this inertia-block within the sleeve, I have provided the spring 14 or other yieldable member which is interposed between it and the head, which serves to absorb or cushion the shocks of the riveting blows.

Another and lighter spring 20 is arranged in the recess 21 in this inertia-block, to act upon the projecting end 22 of the anvil-block and snap or quickly return the anvil back into engagement with the rivet-head in advance of the return stroke of the inertia-block which is subsequently moved to produce a counter blow against the anvil-block at the same time that the riveting hammer strikes on the opposite end of the rivet thus producing the maximum riveting effect on the work.

In some instances it is found desirable particularly during the initial riveting strokes of the hammer, to produce the backing-up effect of a solid dolly-bar, which effect may be readily obtained with my improved bar by the exerting of the necessary pressure on the bar to compress both of the springs sufficiently so that the outer end of the inertia-block will rest against the inner end of the head 11. After the first few riveting strokes this pressure is reduced so as to permit the springs to act as cushions and so assist the members within the sleeve to absorb the shocks of the continuous blows and prevent them from being transmitted to the body of the workman.

In some cases instead of employing a single inertia block, as illustrated in Fig. 1, I divide this block into two parts 23 and 24, as illustrated in Fig. 2, and in this case I interpose another spring 25 between the two

inertia blocks, which for some kinds of riveting is considered more effective than the action of the single inertia block illustrated in Fig. 1.

My riveting dolly is designed to be operated on any kind of a riveting job, either structural, tank, boiler or shipbuilding work and by its use a comparatively unskilled workman may use this dolly-bar effectively, while the other types of dolly-bars require a skilled workman of unusual strength to stand the strain of continuous work to produce a satisfactory riveting job.

The foregoing description is directed solely toward the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A dolly-bar comprising a body portion formed of a sleeve having a fixed head at one end, a relatively light anvil-block slidably mounted in the opposite end of said sleeve, a relatively heavy inertia-block slidably mounted intermediate said anvil and head, and cushioning members interposed between said inertia-block and head and between said inertia and anvil blocks.

A dolly-bar comprising a body portion formed of an elongated sleeve having a fixed head at one end, an anvil block slidably mounted in the opposite end of said sleeve, a relatively heavy inertia-block slidably mounted in said sleeve between said head and anvil, said inertia-block being divided into a plurality of members, a spring interposed between each of said members, a spring interposed between the outer member of the inertia-block and the head, and a spring interposed between the inner member of the inertia-block and the anvil-block.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH D. LORANGER.

Witnesses:

HOWARD E. BARLOW,
A. F. MACREADY.