May 30, 1933. M. BORNSTEIN 1,912,063

HARNESS HEDDLE WASHER

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Fig. 1.

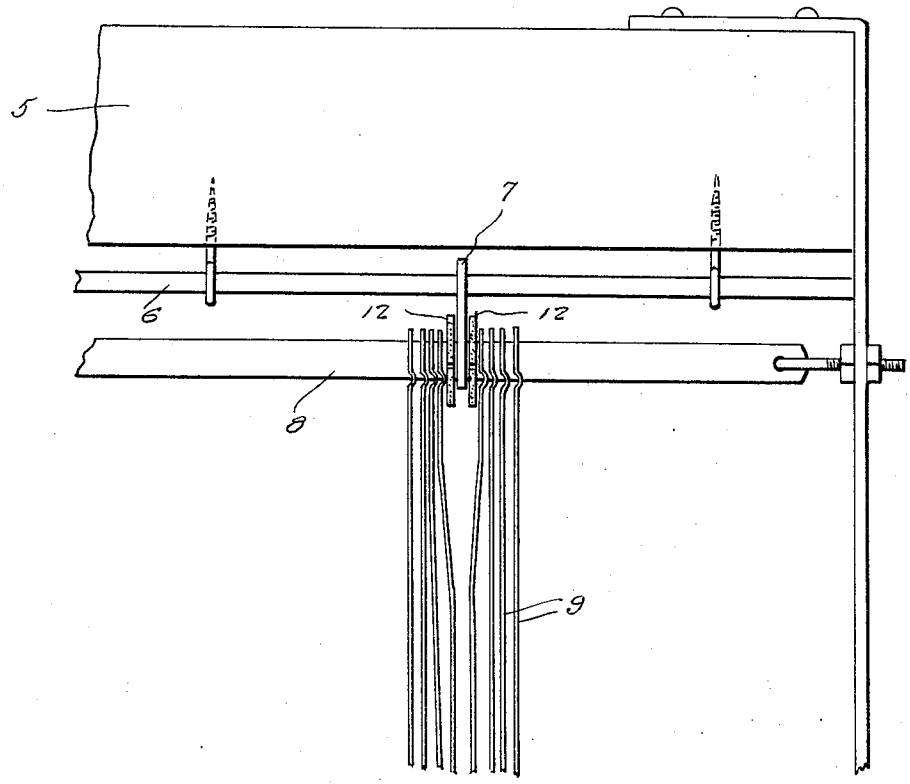
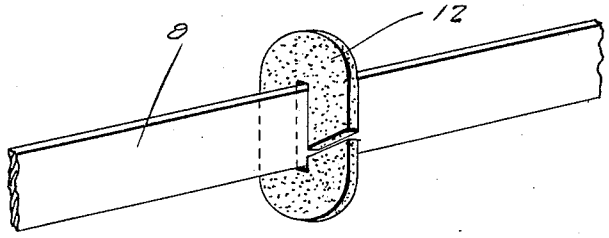


Fig. 3.



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Fig. 2.

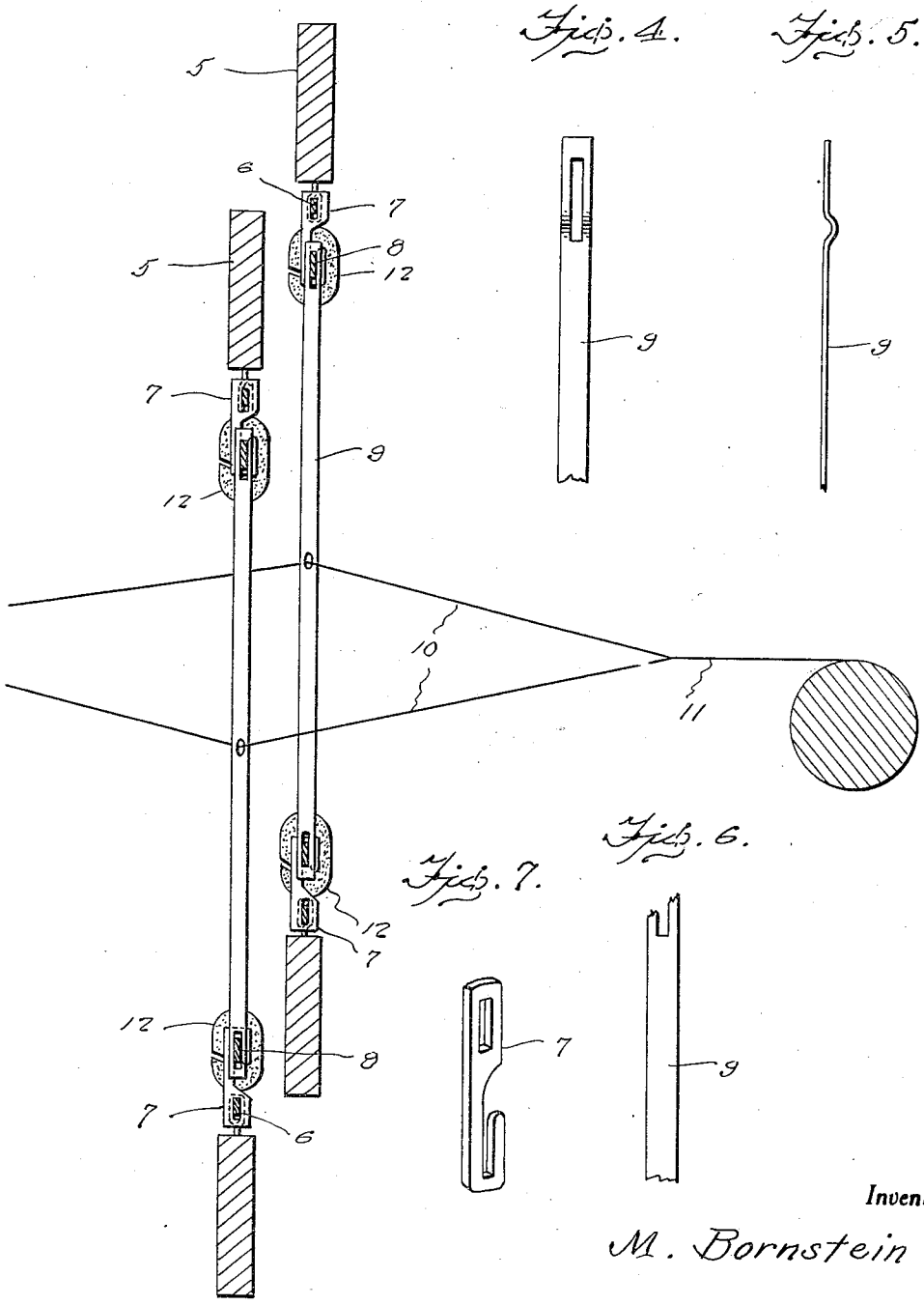


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE

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HARNESS HEDDLE WASHER

Application filed December 2, 1932. Serial No. 645,470.

This invention appertains to new and useful improvements in the textile industry and more particularly to improvements in heddle harness.

It is a known fact in the manufacture of cloth that the steel heddles wear at the point of support, due to the rubbing action against the steel hanger, finally breaking and falling into the warp causing what is known to the art as "heddle smashes" breaking the warp and resulting in a damaged piece of cloth. The friction between these parts cannot be reduced by lubrication as no oil can be obtained that will not soil the warp and cloth.

The principal object of the present invention is to provide a washer or bumper of a softer material than steel for interposition between the heddles and hanger to prevent wear on the heddles.

Another important object of the invention is to provide a wear resisting element of the character stated which can be easily installed and removed.

Another important object of the invention is to provide a wear resisting element of the character stated which can be easily secured in place so that it will not become displaced accidentally.

These and various other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:—

Figure 1 represents a fragmentary top plan view of one corner of the heddle harness, showing the hanger, the heddles and the self-locking washer element in assembled relation.

Fig. 2 represents a vertical sectional view through the heddle harness showing the warp passing through the heddles, the frame and hanger.

Fig. 3 represents a fragmentary perspective view of the washer element in position on a heddle bar.

Fig. 4 represents a fragmentary side elevational view of one of the heddle bars.

Fig. 5 represents a fragmentary edge elevational view of one of the heddle bars.

Fig. 6 represents a fragmentary side elevational view of one of the heddle bars showing how the eye end breaks.

Fig. 7 represents a perspective view of one of the hangers.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 denotes the frame to which are fastened the hanger bars 6. The steel hanger 7 supports the heddle bar 8 on which the heddles 9 are mounted. Numeral 10 illustrates the warp passing through the eye of the heddle and numeral 11 represents a cloth wound on the roll.

Numeral 12 illustrates the self-locking harness heddle washer or bumper placed between the steel hanger 7 and the steel heddles 9 on the heddle bar 8 (see Figs. 1 and 3).

This self-locking heddle harness washer is made up of a thin piece of soft material such as fiber, paper, rubber or similar material, preferably oval in shape with a rectangular slot in the center and an angular slit from the slot to the outer edge.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described my invention, what I claim as new is:—

1. In combination, a heddle bar, a hanger for the bar, heddles supported by the bar, a resilient split washer for interposition between the hanger and the heddle, said washer circumscribing the heddle bar.

2. In combination, a heddle bar, a hanger for the bar, heddles supported by the bar, a resilient washer for interposition between the hanger and the heddle, said washer being provided with an oblique thread extending inwardly from the outer edge thereof to afford opening of the washer to permit mounting and demounting.

In testimony whereof I affix my signature.

MORRIS BORNSTEIN.