

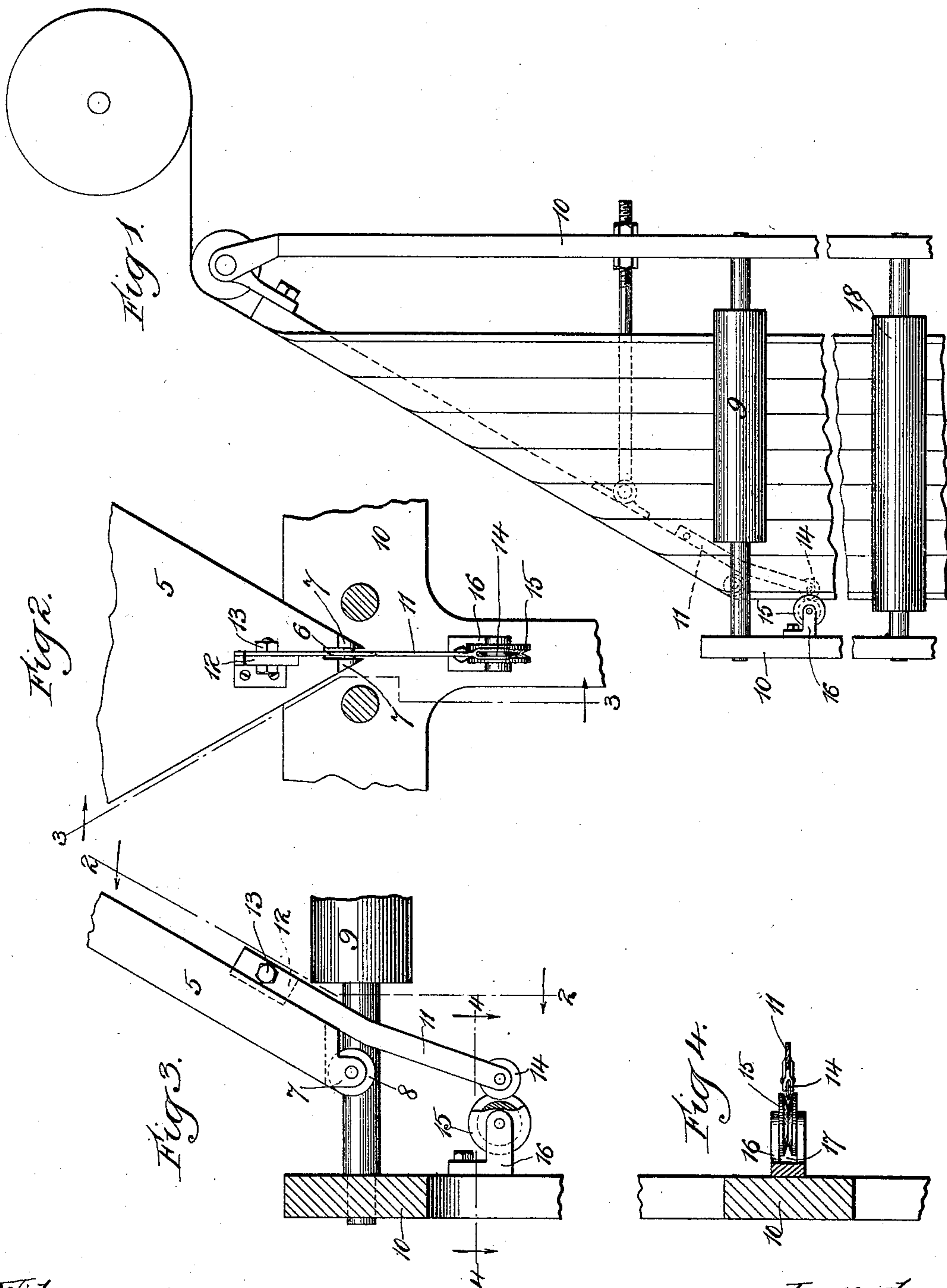
(No Model.)

S. G. GOSS.

MACHINE FOR DOUBLING WEBS OF FABRIC LONGITUDINALLY.

No. 517,693.

Patented Apr. 3, 1894.



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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR DOUBLING WEBS OF FABRIC LONGITUDINALLY.

SPECIFICATION forming part of Letters Patent No. 517,693, dated April 3, 1894.

Application filed May 8, 1893. Serial No. 473,344. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL G. GOSS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Doubling Webs of Fabric Longitudinally, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a detail, being a view of the folding apparatus, on line 2—2 of Fig. 3. Fig. 3 is a side view of certain parts of the machine, being a section on line 3—3 of Fig. 2; and Fig. 4 is a sectional view on line 4—4 of Fig. 3, looking downward.

My invention relates to machines designed to longitudinally fold a fabric passing through the folding apparatus in the form of a continuous web, and has particularly to do with that class of folding machines in which the web is passed over a V shaped former, the line upon which the web is to be folded passing over the apex of the former. In machines of this class it is customary to make use of guide rollers or turners, placed at the sides of the former near its apex, for holding the folded over portions of the web upon the former. Such rollers do not serve to crease the web along the folded line or to lay the fold, for the reason that they are placed a distance apart, and therefore cannot so operate. When the turners above referred to are used, it is necessary to provide a second pair of rollers, placed in contact with each other, between which rollers the folded web passes, and the fold is thereby laid. In machines of this class, in order to secure a perfect fold, it has been found necessary to provide the former with a flexible nose or apex, which pressed the inner surface of the web along the central line of the fold, thereby creasing it, so that when the fold was laid the folded edges would not be displaced, as would be the case if there were no well defined crease. The devices heretofore used for creasing the web, as above described, have been found to be unsatisfactory, for the reason that by their use the crease could not be sufficiently well defined, and

also, they have not been found sufficiently durable and inexpensive.

The object of my present invention is to provide a new and improved folding machine, which will be provided with a creasing device by means of which a well defined crease may be made in the web, and which will also combine the important advantages of being durable and economical. I accomplish this object as hereinafter described, and as illustrated in the drawings.

That which I regard as new will be set forth in the claims.

In the drawings,—5 indicates a former, of the usual V shaped form, which former is provided at its apex with a slot 6, as best shown in Fig. 2. 7 indicate ears, which depend from the apex of the former, one at each side of the slot 6. Journaled between the ears 7 is a roller 8, having a V shaped periphery, as shown in Fig. 2. The roller 8 is adapted to bear against the underside of the web along the line of the fold as the web moves over the former, and thereby to a certain extent mark or indent the line of the fold.

9 indicates the usual guide rollers or turners, which are mounted in the frame 10 of the machine.

11 indicates an arm, the upper end of which is rigidly attached to a plate 12 at the back of the former 5, by a bolt 13, as shown in Fig. 2. The arm 11 projects downward, and is bifurcated at its lower end, in which end is journaled a creasing roller 14.

Instead of securing the arm 11 to the former, as above described, it may be rigidly secured in position in any other suitable manner. The periphery of the roller 14 is also V shaped, and it is adapted to bear against the web in the line marked out by the roller 8.

15 indicates a third roller, which is pivoted in a bracket 16 rigidly secured to the frame 10, or to any other suitable support. The roller 15 is mounted opposite the roller 14, and is provided with a V shaped groove 17 in its periphery, as shown in Fig. 4. The groove 17 is adapted to receive the outer portion of the roller 14, as shown in Fig. 4. The arrangement is such that as the web passes



from the former, it will be conducted between the rollers 14 and 15, the line of the fold passing between said rollers. A well defined crease will thereby be made in the web along the line of the fold, so that when the folded web is subsequently passed between the usual fold laying rollers 18, the fold will be accurately laid.

I have described the three rollers as having V shaped peripheries, but it is obvious that their peripheries may be slightly varied in form so long as they are not unfitted for the purpose stated.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a V shaped former, of a roller journaled at the apex thereof, for marking the line of the fold after the web passes over the former substantially as described.

2. In a folding machine, the combination with a V shaped former, of creasing rollers adapted to receive the web as it passes from the former, substantially as described.

3. In a folding machine, the combination with a V shaped former, of creasing rollers arranged to receive the web after it passes from the former, and fold laying devices, substantially as described.

4. In a folding machine, the combination with converging internal guides, and external turners, of a roller mounted at the apex of said internal guides, substantially as described.

5. In a folding machine, the combination with a V shaped former, of a roller mounted at the apex thereof, and creasing rollers arranged to receive the web after it passes from said former, substantially as described.

6. The combination with a V shaped former, and external turners, of fold laying devices, and creasing rollers between said former and said fold laying devices, substantially as described.

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Witnesses:

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