No. 766,630. PATENTED AUG. 2, 1904.

D. KOPS.

CORSET STAY.

APPLICATION FILED OCT. 29, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

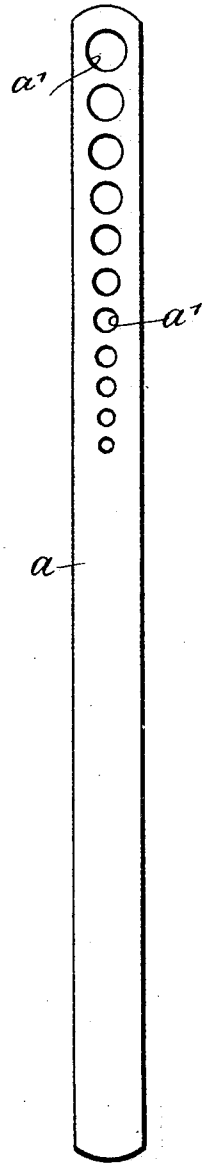


Fig. 2.

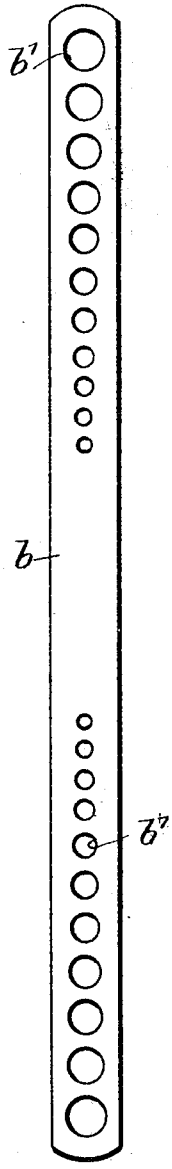


Fig. 3.

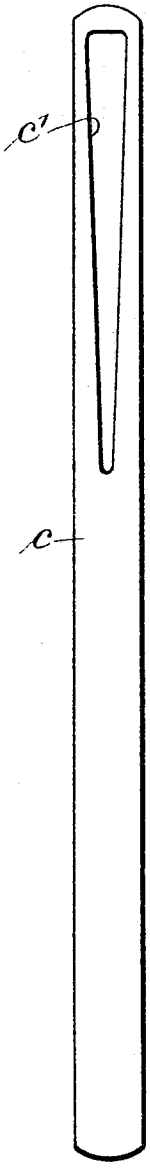
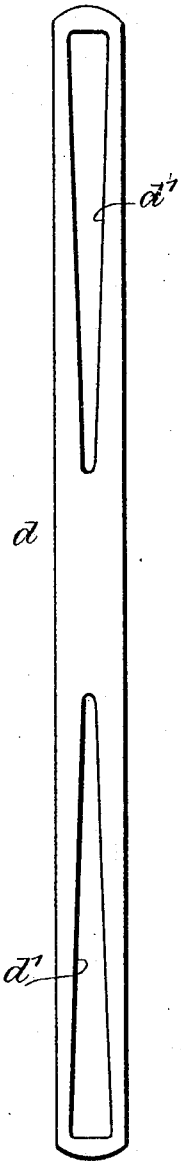


Fig. 4.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 5.

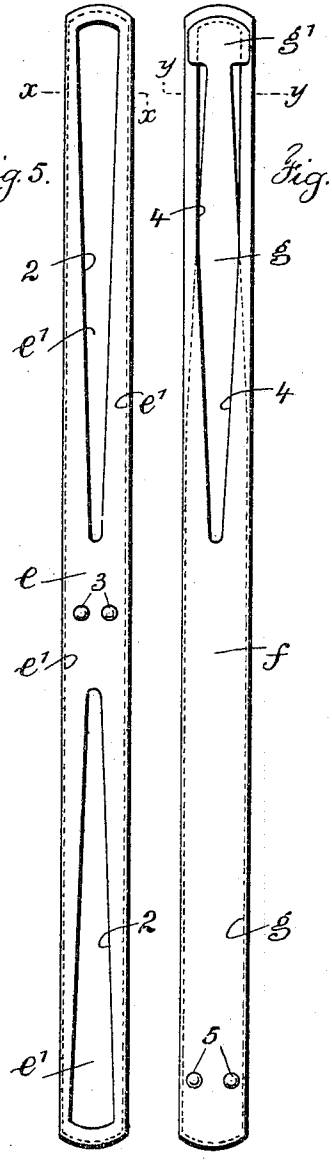


Fig. 6.

Fig. 9.

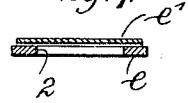


Fig. 10.

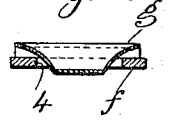


Fig. 8.

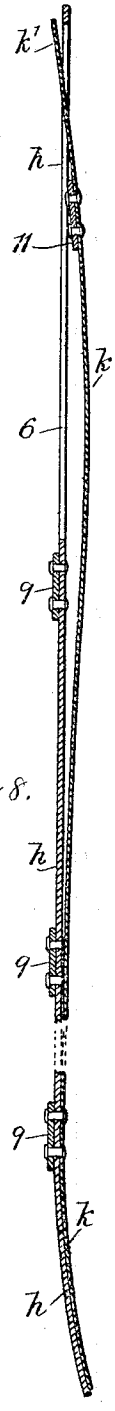
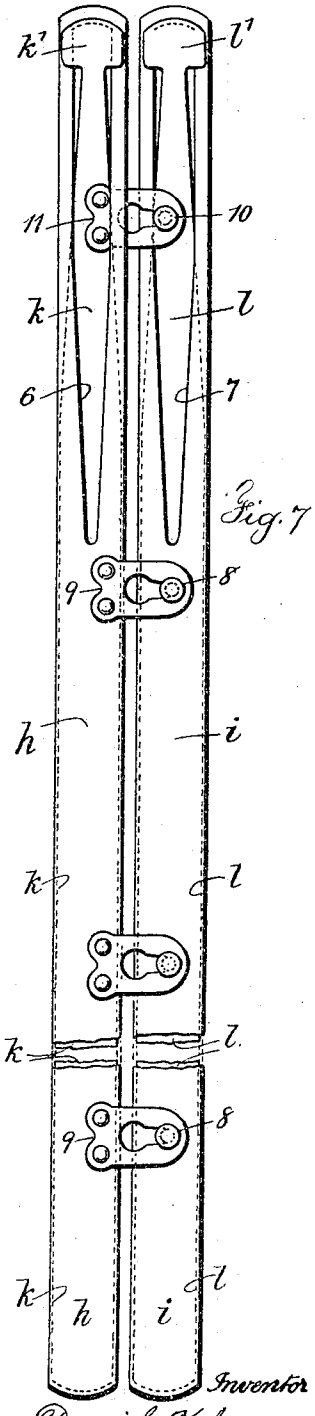


Fig. 7.



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No. 766,630. Patented August 2, 1904.

UNITED STATES PATENT OFFICE.

DANIEL KOPS, OF NEW YORK, N. Y.

CORSET-STAY.

SPECIFICATION forming part of Letters Patent No. 766,630, dated August 2, 1904.

Application filed October 29, 1903. Serial No. 178,965. (No model.)

To all whom it may concern:

Be it known that I, DANIEL KOPS, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented an Improvement in Corset Steels and Stays, of which the following is a specification.

My invention relates to corset steels and stays; and the object of my invention is the formation of a steel or stay having an elasticity at one or both ends which is gradually increasing from the middle toward one or both ends.

In carrying out my invention this graduated pliability results from removing the metal of the steel or stay in gradually-progressing ratio, so that a minimum quantity of metal is removed nearest the center, while a maximum quantity is removed near the end.

My invention is applicable to one or both ends of a steel or stay, and is especially advantageous with the front steels of a corset. In connection with these parts, and especially the front steels, I prefer to employ a coacting steel or stay secured thereto and parallel therewith and which is preferably of thinner harder material and at one or both ends is tapered and at the immediate upper end of which is a head portion to pass through and overlap the opening of the superimposed steel and temporarily connect the parts.

In the drawings, Figures 1, 2, 3, and 4 are respectively elevations illustrating the simpler forms of my invention. Fig. 5 is an elevation of the simpler form of my invention in which a coacting steel or stay is employed parallel with the main steel or stay. Fig. 6 is an elevation generally similar to Fig. 1, but in which the coacting steel or stay is provided with a head portion to pass through and overlap the opening of the superimposed steel. Fig. 7 is an elevation illustrating a pair of front corset-steels made according to my invention. Fig. 8 is a vertical section through one of the steels, Fig. 7. Fig. 9 is a sectional plan at $x\,x$, Fig. 5; and Fig. 10, a sectional plan at $y\,y$, Fig. 6. Figs. 9 and 10 are of exaggerated size over Figs. 5 and 6 for clearness.

In Fig. 1 the steel or stay a is provided with apertures a' at one end, which apertures gradually increase in area from adjacent to the center of the steel to one end, the smallest aperture being the nearest the center and the largest at the ends. Consequently the metal at one end of the steel is removed in gradually-progressing ratio, creating a graduated pliability at this end of the steel.

In Fig. 2 the steel or stay b is similar to the steel or stay a except that both ends are formed alike and are like the perforated end in Fig. 1, so that the steel or stay is given a graduated pliability as the result of removing the metal of the steel or stay in gradually-progressing ratio. b' represents the apertures at both ends of the steel or stay b.

In Fig. 3 the steel or stay c is provided with an elongated tapering opening c' at one end, and in Fig. 4 the steel or stay d is provided with elongated tapering openings d' at the respective ends, the formation of these opening c' d' removing the metal at one or both ends of the steel in gradually-progressing ratio, so as to produce the desired graduated pliability.

In Fig. 5 the steel or stay e is made like the steel or stay d in Fig. 4, with elongated gradually-increasing openings 2 at both ends; but in this form of my invention I employ a steel e', superimposed upon the steel or stay e and connected thereto by rivets 3. The steel e' is approximately the length and width of the steel e, but is preferably thinner and of harder more springy material, and it will be apparent that in the ratio of superimposed metal the same graduated pliability is maintained in the form shown in Fig. 5 as is maintained in the forms of the prior Figs. 1 to 4, inclusive.

In Fig. 6 the steel or stay f is provided with an elongated gradually-tapering opening 4 at one end only, and the superimposed steel g, lying closely against one side of the steel or stay f, is connected to the said steel f by rivets 5 at the lower end, the peculiarity of the structure Fig. 6 being in tapering the superimposed steel g at one end, while at the extreme end a head g' is formed by leaving the steel of the full width and terminating the tapering end at shoulders appreciably distant from the end of the steel. In this form

of the invention the head portion g' passes through and overlaps the opening of the steel f, so as to keep the free ends of the steels in a connected relation.

Fig. 9 shows the superimposed relation of the steels Fig. 5, while Fig. 10 shows not only such relation of the steels, but the relation of the head g' to the adjacent parts.

In Figs. 7 and 8, h i represent the front steels of a corset, in the upper ends of which are formed gradually-tapering elongated openings 6 7. The front steels h i are provided with studs 8 and eye-plates 9, by which they may be connected. The steels k l are superimposed on the front steels h i. They are preferably formed with heads k' l' and tapered adjacent to the ends like the steel g, Fig. 6, the head portions passing through and overlapping the openings of the steels h i. They are preferably connected together—that is, the steels k and h, by the studs of the eye-plates 9 at the lower ends of the steels and the steels i and l by the lowermost stud 8. The stud 10 at the upper end is connected to the steel l, while the eye-plate 11 for engaging the same also at the upper end is connected to the steel k, it being more convenient to connect this stud and eye-plate to the steels k and l not only on account of anchorage, but on account of the relation of the superimposed steels, as the parts should be in an intimate relation at the upper ends, where there is the greatest amount of flexibility and bending of the steels and where the greatest amount of graduated pliability is desirable.

The form shown in Figs. 6, 7, and 8 possesses an appreciable amount of pliability over the forms shown in the other figures, and to this the preference is given. Furthermore, in these superimposed steels greater strength and rigidity are effected at the waistline, where the greatest support is required.

I claim as my invention—

1. As a new article, a steel or stay from one end of which the metal is removed in gradually-progressing ratio so as to create a graduated pliability, the minimum of removal being nearest the center and the maximum adjacent to the end of the stay.

2. As a new article, a steel or stay having in one end an elongated gradually-increasing opening narrowest nearest the center of the steel or stay and widest near the end, produced by removing the metal in gradually-progressing ratio and thus producing graduated pliability.

3. As a new article, a steel or stay having in one end an elongated gradually-increasing opening narrowest nearest the center of the steel or stay and widest near the end, produced by removing the metal in gradually-progressing ratio and thus producing graduated pliability, and a steel superimposed upon the aforesaid steel and connected thereto.

4. As a new article, a steel or stay having in one end an elongated gradually-increasing opening narrowest nearest the center of the steel or stay and widest near the end, produced by removing the metal in gradually-progressing ratio and thus producing graduated pliability, and a steel superimposed upon the aforesaid steel and connected thereto, said superimposed steel having a head at the end adjacent to the opening in the aforesaid steel and tapering to shoulders produced at said head portion, the head portion being passed through the opening of the steel so as to removably connect the steels.

5. As a new article, a pair of front corset-steels, each formed at adjacent ends with an elongated gradually-increasing opening produced by removing the metal in gradually-progressing ratio for the production of a graduated pliability, each opening being the narrowest nearest the center of the steel and widest near the end, steels superimposed upon the aforesaid steels each with a head portion at the end adjoining the aforesaid openings and adjacent tapering portions terminating at the shoulders of the heads with the head portions passing through the openings and overlapping the superimposed steels, and studs and eye-plates upon the respective parts for connecting them together.

Signed by me this 23d day of October, 1903.

DANIEL KOPS.

Witnesses:
GEO. T. PINCKNEY,
BERTHA M. ALLEN.