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ADJUSTABLE SCREEN DOOR HINGE

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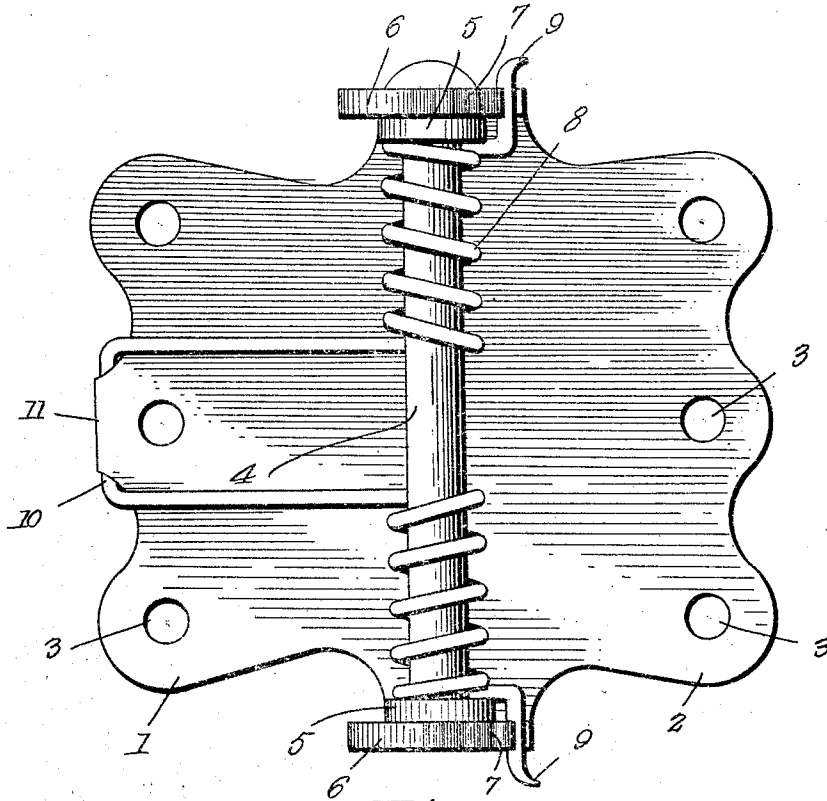


Fig. 1.

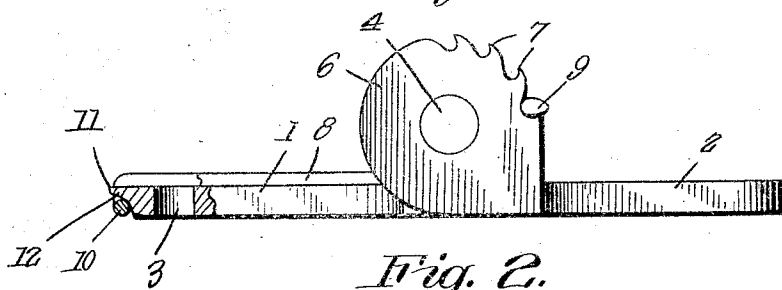


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE SCREEN-DOOR HINGE.

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This invention relates to hardware and more particularly to hinges.

The object of the invention is to provide a spring hinge for use on screen doors and the like which is so constructed as to be strong, have a maximum amount of leverage, and which can be adjusted to meet the requirements for closing various doors and in which the tension of the spring can be readily adjusted and which may be replaced when necessary.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 represents a front elevation of a hinge constructed in accordance with this invention; and

Fig. 2 is an end elevation thereof with parts broken out and in section.

In the embodiment illustrated two plates 1 and 2 are shown substantially rectangular in form having apertures 3 at opposite side edges for receiving the fastening screws for connection to a door and its jamb respectively. The inner edges of these plates are connected by a pintle 4 which extends through overlapping apertured ears 5 and 6 at the opposite ends of the plates 1 and 2 respectively. The lugs 6 carried by plate 2 have ratchet teeth 7 formed in the edges thereof which are designed to adjustably receive the laterally extending ends 9 of a coiled spring 8 which is wrapped around the pintle 4. This coiled spring 8 has a laterally extending loop 10 formed midway the ends thereof which is designed to engage a lug 11 on the outer edge of plate 1, the lower face 12 of which is beveled on the side next the spring as shown in Fig. 2 to prevent binding of the spring during the opening and closing of the door. The loop 10 is here shown substantially U-shaped in form and by being engaged with the outer edge of plate 1 provides a maximum amount of leverage.

To enable it to work as nearly perfect as possible the spring 8 should play loose and free around the pintle and above the plate. 55 Therefore all lugs should be raised high enough for that purpose. It will be seen that the lug 11 not only gives greater leverage but if the spring were left resting on the plate and it was designed to increase the energy by raising the ends in the ratchet, it would be inclined to draw that end of spring down under the pintle without giving the same amount of energy. 60

The ratchet teeth 7 are for the purpose of increasing the tension of the spring when it stretches which is accomplished by sliding or lifting the ends or fingers 9 from the lowermost notch or tooth to the succeeding higher one. It will thus be seen that the tension of the spring 8 may be adjusted to meet the amount of energy required for closing various doors. 65

The pintle 4 is removably mounted in the lugs 5 and 6 so that should the spring 8 be broken it may be readily replaced. 70

I claim:—

A hinge comprising plates, said plates having upwardly extended ears, said ears having apertures, a pintle extending through the apertures, the ears of one plate having ratchet teeth formed thereon, an intermediate offset portion formed on one edge of one plate, providing a lug, said lug having its under surface cut away to provide a seat, a spring member having a loop portion fitted in the seat and embracing a portion of the lug, said spring having coiled portions coiled around portions of the pintle and lying in spaced relation therewith, the coiled portions of the spring having their extremities extended laterally providing finger pieces, the laterally extended portions adapted to cooperate with the teeth for tensioning the coiled spring, and the extremities of the coiled portions extending beyond the side faces of the ears of the plates. 75 80 85 90

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

SAMUEL FRANCIS ELLIOTT.