March 5, 1957 W. L. JUMP 2,783,566

COLLAPSIBLE WORK SIGN

Filed Aug. 30, 1954

2 Sheets-Sheet 1

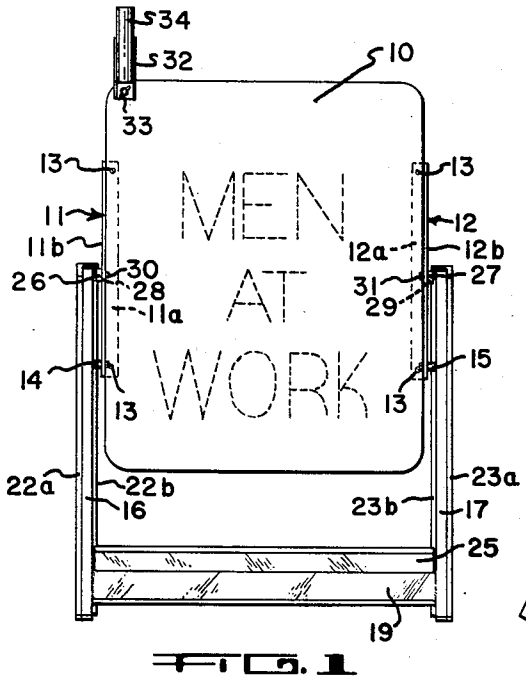

FIG. 1

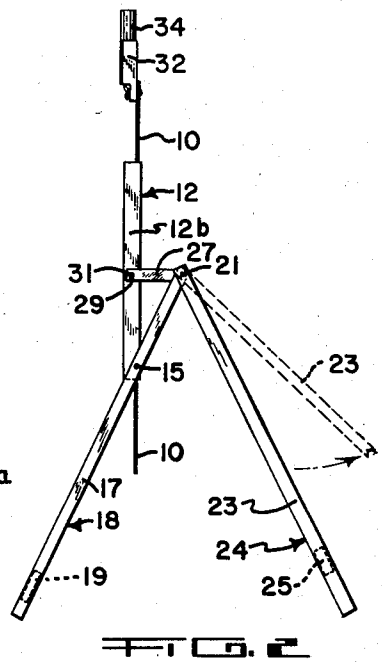

FIG. 2

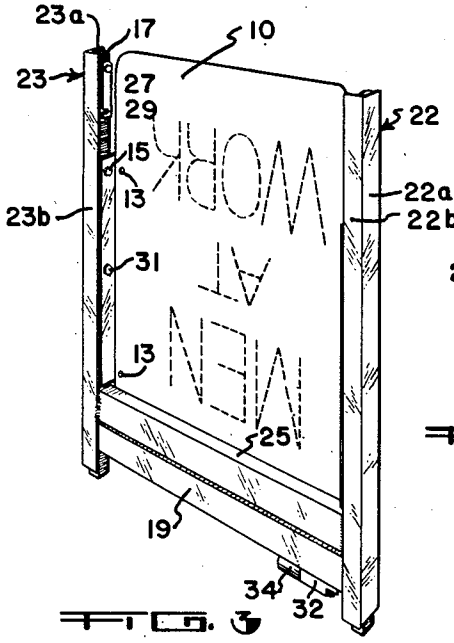

FIG. 3

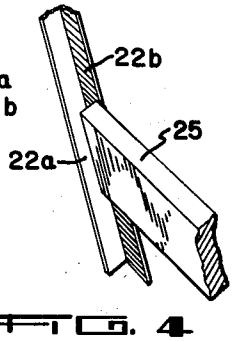

FIG. 4

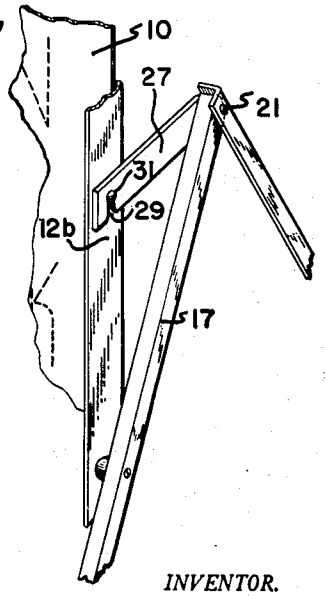

FIG. 5

INVENTOR.
WILLIAM L. JUMP
BY Robert C. Comstock
HIS ATTORNEY

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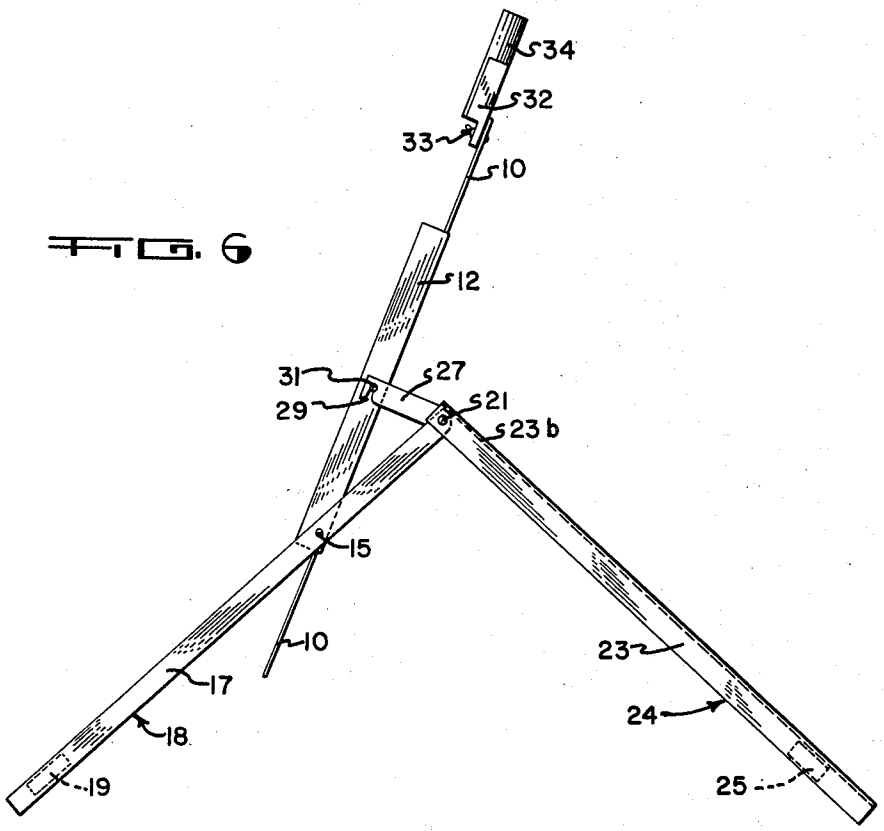
FIG. 6



WILLIAM L. JUMP
INVENTOR.

BY Robert C. Comstock

HIS ATTORNEY

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2,783,566

COLLAPSIBLE WORK SIGN

William L. Jump, Ojai, Calif.

Application August 30, 1954, Serial No. 452,768

4 Claims. (Cl. 40—125)

This invention relates to a collapsible work sign and particularly to such a device which is adapted to be used on roads and highways as a warning to traffic for the safety of passing vehicles and persons doing maintenance work.

It is an object of my invention to provide such a sign which is an improvement over conventional and prior signs in several ways. First, my sign collapses completely to a size which is substantially the same in length and width as the signboard itself, with a thickness of only one inch. Second, my sign when collapsed can be stored or carried flat, so that a large number of signs can be stored or carried in a small space. Third, my sign is so constructed that the painted or legend side of the signboard is protected by the framework when the sign is collapsed. Fourth, my sign cannot be sucked or blown over by passing vehicles, since wind causes it to assume a position having greater stability and in which the wind passes over the sign. Fifth, my sign needs no additional weights or holding devices of any kind.

It is also among the objects of my invention to provide a sign of the class described which is simple and economical to manufacture and which is capable of widespread use.

My invention also comprises such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompanying drawings a preferred embodiment of my invention, it should be understood that the same is susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawings:

Fig. 1 is a front elevational view of my sign in use;

Fig. 2 is a side elevational view of the same;

Fig. 3 is a perspective view of my sign in collapsed position;

Fig. 4 is an enlarged perspective view of a portion of my back frame member;

Fig. 5 is an enlarged perspective view of the latch portion on the side of my sign;

Fig. 6 is a side elevational view of my sign in the position which it assumes when subjected to wind pressure.

A preferred embodiment which has been selected to illustrate my invention comprises a substantially rectangular signboard **10**, which is preferably formed of metal and has a legend painted on one side thereof. The entire legend side of signboard **10** is customarily painted in order to increase its effectiveness in attracting the attention of drivers.

The signboard **10** is attached adjacent its side edges to a pair of centrally disposed L-shaped flanges **11** and **12** by means of screws **13** or other suitable fastening means. One side **11***a* and **12***a* of said flanges extends behind signboard **10** to receive screws **13**, while the other side **11***b* and **12***b* extends at a right angle forwardly from the edges of signboard **10**. A pair of pivots **14** and **15**

extend through sides **11***b* and **12***b* to pivotally attach signboard **10** to the upwardly extending arms **16** and **17** of a U-shaped front frame member **18**. Pivots **14** and **15** may be rivets, bolts or other suitable mounting devices and are attached adjacent the upper portion of arms **16** and **17**.

The bottom of front frame member **18** comprises a front iron bar **19**, which is approximately one inch thick and several inches wide. It extends transversely between arms **16** and **17** adjacent the bottom thereof. Arms **16** and **17** are substantially square in cross section.

The top ends of arms **16** and **17** are pivotally attached by a pair of bolts **20** and **21** to the top ends of the side pieces **22** and **23** of a U-shaped back frame member **24**. Side pieces **22** and **23** are L-shaped in cross section, with one side **22***a* and **23***a* extending along the sides of arms **16** and **17** and the other side **22***b* and **23***b* extending inwardly towards signboard **10**. The bottom of back frame member **24** comprises a back iron bar **25** which is substantially the same size as front iron bar **19**. It extends transversely between the inner edges of inwardly extending side **22***b* and **23***b*.

It should be noted that the ends of back iron bar **25** do not extend all the way to sides **22***a* and **23***a*. Instead they stop short to provide an open space which is slightly wider than arms **16** and **17** of front frame member **18**.

A pair of latches **26** and **27** are pivotally mounted at one end on bolts **20** and **21**. Latches **26** and **27** are provided adjacent their opposite free ends with U-shaped slots **28** and **29**, which are adapted to removably fit over a pair of pins **30** and **31**, which project outwardly from sides **11***a* and **12***a* of flanges **11** and **12**.

A warning flag holder is provided adjacent the upper lefthand corner of signboard **10**. It comprises a channel member **32**, which is pivotally attached to signboard **10** by a bolt and wing nut **33**. A short tube **34** is held within channel member **32** and is adapted to receive the bottom of a warning flag. In use, wing nut **33** is loosened and channel member **32** and tube **34** pivoted to vertical position, in which they are held by the tightening of wing nut **33**. If the flag holder is not used or if the sign is collapsed, channel member **32** and tube **34** may be pivoted and held in a position parallel to the top of sign board **10**.

In use, my sign assumes the position shown in Fig. 1 of the drawings. The front frame member **18** and back frame member **24** form a triangle with the ground. Signboard **10** extends vertically, with its sides held by pivots **14** and **15** and latches **26** and **27**.

To collapse my sign, latches **26** and **27** are lifted upwardly at their free ends to free pins **30** and **31** from slots **28** and **29**. Signboard **10** is then free to be rotated on pivots **14** and **15**. The top of signboard **10** is moved forwardly and downwardly toward front iron bar **19** until its legend side contacts front iron bar **19**. Front frame member **18** and back frame member **24** are moved toward each other, pivoting on bolts **20** and **21** until arms **16** and **17** lie within side pieces **22** and **23**. Arms **16** and **17** fit in the space between the ends of back iron bar **25** and sides **22***a* and **23***a*.

Back iron bar **25** is disposed farther from the bottom than front iron bar **19** by slightly more than the width of front iron bar **19**, so that the bars are positioned adjacent to each other when the sign is in collapsed position. The flag holder extends along the top of signboard **10** and fits between the bottom edge of front iron bar **19** and the bottom ends of arms **16** and **17**.

It should be noted that my sign thus collapses to a size which is substantially equal in length and width to that of the signboard itself, and which is only one inch thick, that being the width of sides **22***a* and **23***a*. In collapsed

form, the front iron bar **19** and back iron bar **25** extend across the legend side of signboard **10** and sides **22***a* and **23***a* extend along its edges to protect the paint for damage.

Front iron bar **19** and back iron bar **25** are extremely heavy and provide a considerable amount of weight closely adjacent to the ground to give the sign an extremely low center of gravity, so that no additional weights are necessary. Signboard **10** may be provided with small holes to permit air to pass therethrough.

If my sign is struck by wind from a passing vehicle, it cannot be sucked or blown over. Instead of tipping the sign, wind pressure on the legend side of sign board **10** will cause rearwardly directed pressure to be exerted through latches **26** and **27** on bolts **20** and **21**. It will also cause forwardly directed pressure to be exerted on pivots **14** and **15** by the bottom of signboard **10**. Front frame member **18** and back frame member **24** are spread farther apart until the ends of arms **16** and **17** bear against sides **22***b* and **23***b*. This tilts signboard **10** in a rearward direction so that wind can more easily pass over it.

My sign thus assumes the position shown in Fig. 6 of the drawings, in which the center of gravity is even lower, the supporting frames are farther apart and the signboard is tilted to pass the wind. It is almost impossible for the sign to be blown over from such a position, but the legend on signboard **10** will still be legible to traffic and the sign will continue to serve its purpose.

When my sign is in collapsed position, latches **26** and **27** pivot to lie parallel to the inside of arms **16** and **17**.

The top ends of arms **16** and **17** are square at their front portions and rounded toward their rear portions. This permits movement of arms **16** and **17** with respect to side pieces **22** and **23** from the position shown in Fig. 2 of the drawings to that shown in Fig. 6 of the drawings. Such movement is resisted by friction between the rounded portions of the ends and sides **22***b* and **23***b*. When the sign reaches the position shown in Fig. 6, the square portion of the ends bears against sides **22***b* and **23***b* and prevents any further movement of arms **16** and **17** with respect to side pieces **22** and **23**.

I claim:

1. A collapsible sign comprising a substantially rectangular sign board, a pair of substantially U-shaped frame members, each of said frame members having a heavy iron bar extending transversely across the lower portion thereof, the length and width of each of said frame members being substantially equal to that of said sign board, said frame members being pivotally attached to each other at their top ends, the lower portion of said sign board being pivotally attached to one of said frame members adjacent the upper portion thereof, the distance between said point of attachment and the bottom of said sign being substantially equal to the distance from said point of attachment to the attached upper ends of said frame members, a latch pivotally attached at one end adjacent to the attached upper ends of said frame members, latch receiving means carried by said sign board adjacent the mid-portion thereof, said latch receiving means being adapted to engage the opposite end of said latch, said sign adapted to be pivoted to a flat collapsed position wherein said frame members and sign board are aligned substantially parallel to each other to form a flat collapsed unit substantially equal in length and width to said sign board, said sign adapted to be pivoted to an open position wherein said frame members form an inverted V, said sign board being held in vertical position along the line of its attachment to said frame members, said latch being attached to said latch receiving means and extending horizontally from the mid-

portion of said sign board to the point of attachment of said frame members to provide a second spaced support for said sign board.

2. The subject matter of claim 1, said frame members being pivotable to a third position wherein the bottoms of said frame members are spaced farther apart from each other, said sign board adapted upon wind pressure being exerted thereon to tip rearwardly and exert pressure to move said frame members to said position to prevent said sign board from being blown over.

3. A collapsible sign comprising a substantially rectangular sign board, a pair of frame members, each of said frame members having a heavy portion adjacent the lower part thereof, the length and width of each of said frame members being substantially equal to that of said sign board, said frame members being pivotally attached to each other at their top ends, the lower portion of said sign board being pivotally attached to one of said frame members adjacent the upper portion thereof, the distance between said point of attachment and the bottom of said sign being substantially equal to the distance between said point of attachment and the attached upper ends of said frame members, a support pivotally attached at one end thereof adjacent the attached upper ends of said frame members, said sign adapted to be pivoted to a flat collapsed position wherein said frame members and sign board are disposed substantially parallel to each other to form a flat collapsed unit substantially equal in length and width to said sign board, said sign adapted to be pivoted to an open position wherein said frame members form an inverted V, said sign board being held in vertical position along the line of its attachment to said frame members, the opposite end of said support being attached to said sign board and extending horizontally from the mid-portion of said sign board to the point of attachment of said frame members to provide a second spaced support for said sign board.

4. A collapsible sign comprising a substantially rectangular sign board, a pair of frame members, each of said frame members having a heavy portion adjacent the lower part thereof, the length and width of each of said frame members being substantially equal to that of said sign board, said frame members being pivotally attached to each other at their top ends, the lower portion of said sign board being pivotally attached to one of said frame members adjacent the upper portion thereof a substantial distance from the bottom of said sign board and the top of said frame member, and a support member pivotally attached at one end thereof to at least one of said frame members adjacent the attached upper ends of said frame members, said sign adapted to be pivoted to a flat collapsed position wherein said frame members and sign board are disposed substantially parallel to each other to form a flat collapsed unit substantially equal in length and width to said sign board, said sign adapted to be pivoted to an open position wherein said frame members form an inverted V, said sign board being held in upright position, the opposite end of said support member being attached to said sign board to provide a second spaced support for said sign board.

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