TO DISPOSE OF THE GRASSHOPPERS.

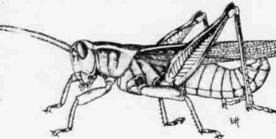
BY PROF. LAWRENCE BRUNER,

Professor of Entomology, University of Nebraska.

During the past few years more or less injury by locusts or grasshoppers, as they are usually called in this country, has been reported from various localities in interior North America. Even within the present month quite a number of such reports have reached us from different localities within our own state. When the natural checks upon locust increase seem to fail, and these insects multiply abnormally, it is necessary to use artificial means to reduce their numbers. It is chiefly to suggest what can be done in this direction that the present article is written.

Aside from the birds, reptiles, and some of the smaller mammals that habitually feed upon locusts, these insects are attacked by numerous species of other insects. These latter, of course, increase and decrease accordingly as their food increases or decreases, but they are also affected by climatic conditions. Conditions that are unfavorable to the increase of these enemies do not seem to appreciably affect the 'hoppers; hence, the frequency with which the latter become destructive does not seem to be materially regulated by parasitic insects.

When we have removed about the only natural check to increase in destruct-



must, therefore, naturally seek relief artifically. Thus far we have been only partially successful in our attempts

to destroy these insects by the use of fungus diseases. Unlike the chinch-bug fungus, the one that attacts grasshoppers is comparatively slow in its action, and only

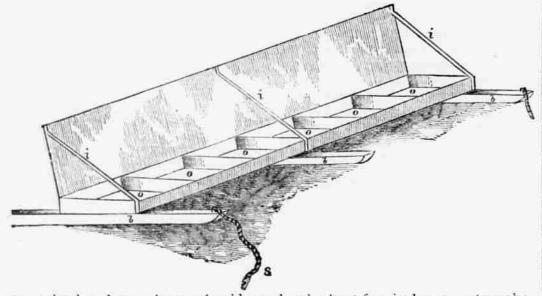
ive numbers of the locusts, we

friends.

THE DIFFERENTIAL LOCUST (MALE.) appears to take hold of the insects after they are about half-grown. This being true, we must look elsewhere for means of warfare.

If we carefully watch where eggs are deposited in rather large numbers, we can destroy these by harrowing the ground and exposing them to the drying influence of the sun or the keen eyes of birds. Deep plowing during fall and early spring will bury locust eggs so deeply that the young 'hoppers are unable to reach the surface.

By all odds the best method of destroying these insects is the use of the "hopper dozer," or kerosene pan, which is shown herewith. This is made of



stove-pipe iron by turning up the sides and en Is about four inches, so as to make a long, flat pan about four inches in depth. This is then mounted on runners varying in height according to requirements. On the frame back of the pan is stretched a piece of cloth to prevent the insects from jumping over the pan. When ready to begin work the pan is partially filled with water and then some coal oil is added. If the ground is level, no cross-pieces are necessary, but if the

REGISTER TIME TABLE. Dudlester	Exhibit of Live Stock.	
Counding tou	The exhibition of live stock at the	RUM GENERAL GENERAL
HOULE MOCOON, NEBRAGRA.	Trans-Mississippi Exposition will be held	in sine in a line in a
LINCOLN, DENVER,	from September 19th to October 20th,	NU/3
OMAHA, HELENA,	and everything points to a large display.	
CHICAGO, BUTTE, ST. JOSEPH, PORTLAND,	J. B. Dinsmore, commissioner of live	勝 SPEC
KANSAS CITY, SALT LAKE CITY,		
ST. LOUIS AND ALL SAN FRANCISCO, POINTS EAST AND AND ALL POINTS	ceived from intending exhibitors is far	LALE .
SOUTH. WEST.	larger in advance of the date for the clos-	154
TRAINS LEAVE AS FOLLOWS:	ing of entries than it was at the Colum- bian Exposition in Chicago. If Mr. Dins-	Illonn I
No. 2. Vestibuled Express, daily,	more's expectations are fulfilled the ex-	
Lincoln, Omaha, St. Joe,	hibition of live stock at Omaha will be	
Kansas City, St. Louis, Chi- cago, and all points south	one of the finest ever given in the coun	THAT IN ALL IN
and east 6:15 A. M.	try.	
No. 4. Local Express, daily, Hast- ings	A sum of \$35,000 was set aside by the	NVR.
No. 6. Chicago Flyer 4:40 P. M.	directors of the Exposition to be award-	Notice Lot No. 1 in
No.148. Freight, daily, ex. Sunday, Hastings and intermediate	ed as cash prizes to livestock exhibitors.	yard; former p
stations	The Union Stock Yards Company of	Lot No. 2 now 8c; fe
drege, Hastings 6:30 A. M.	South Omaha and a number of the breed-	1.100
No. 80. Freight, daily, Hastings and intermediate stations 7:27 A. M.	ers' associations and other live stock or-	Lot No. 3 now 11c; f
No. 64. Freight, daily, Oxford, Red	ganizations offer additional prizes; the total amount offered as premiums to live-	Mulhouse Organdies
Cloud, St. Joe, Kansas City 4:00 A. M. No. 5. Local Express, daily, ar-	stock exhibitors being not far short of	Other Organdies, go
rives at 8:05 P. M.	\$50,000.	and other organales, go
MOUNTAIN TIME. No. 1. Denver Flyer 6:20 A. M.	The live stock exhibit is divided into	和四
No. 3. Vestibuled Express, daily, Denver and all points in	six classes. Of these the poultry exhibit	THESE WILL NOT
Colo., Utah and California, 11:40 P.M.	will be given first-from September 19th	CALL WHILE
No.149. Freight, daily, ex. Sunday, Akron and intermediate sta-	to September 30th. On Monday, Octo-	CALL WHILE
tions 6:45 A. M.	ber 3d, the exhibits of cattle, horses (in	5.973
No. 77. Freight, daily,Stratton,Ben- kelman, Haigler, Wray and	which class are included jacks, jennets	We have Line
Akron	and mules), sheep and swine, will open	EVIA
kelman, Haigler, Wray and	to continue until October 20th; and the	for War
Akron 4:30 P. M. No.175. Accommodation, Mondays,	fat stock will be shown from October 13th to 20th, inclusive. Entries close	Pure IVI Wall
Wednesdays and Fridays,	for fat stock on August 15th, and in all	
Imperial and intermediate stations	other classes on August 15th, and in an	Men's Read
Sleeping, dining and reclining chair cars	Probably all of the northern states	TA SAM
(seats free) on through trains. Tickets sold	will be represented in the poultry ex-	Call and
and baggage checked to any point in the United States or Canada.	hibit. Correspondence has been received	彩码 ial Ba
For information, time tables, maps and	from prominent fanciers all over the	ini s
tickets, call on or write A. P. Thomson, Agent, McCook, Nebraska, or J. Francis, General	country, and the indications are that	5773
Passenger Agent, Omaha, Nebraska.	there will be a fine collection of birds.	Ter a
DAU DOAD NEWS VERVO	Commissioner Dinsmore is especially	GF GF
RAILROAD NEWS ITEMS.	pleased with the prospects for exhibits in cattle, sheep and hogs. He says there	12 IE
Will McManigal is night operator at	will undoubtedly be not less than 1,0:0	WE ARE BETTER
Cambridge.	cattle, the same number of sheep, and	1. AL
Mrs. Ellis Ford is entertaining her	twice as many hogs.	WANTS IN THI
mother, Mrs. Kaster.	The \$35,000 prize money offered by the	18.33
Will Sayers is here on a visit to his	Exposition will be distributed as follows:	AT THE
sister, Mrs. Frank Clary.	Cattle, \$7,000; horses and mules, \$8,000;	
Brakeman H. C. Kiser made Oxford,	hogs, \$7,000; sheep, \$6,000; fat stock,	ISE .
this week, between trains.	\$5,000; poultry, \$2,000. Money from	
	other sources will mostly be devoted to	145
Switchman Charles Erway of Hold-	special premiums.	TUTA DA
rege is east on a visit to relatives and friends	Educational Exhibit.	

Mrs J. W. Line went up to Denver, Monday morning, on a two weeks' visit to friends.

University, and is pronounced by lead-

ing educators of other states as one of

the finest educational exhibits they have

ever seen. The New England Journal of

Education, published at Boston and

Chicago, in its issue of July 14, makes

the following comment: "The educa-

tional exhibit of Nebraska at the Trans-

made in the United States." Great

tors and pupils of the Nebraska schools

making the exhibit a success.

who so faithfully co-operated with us in

While we all are proud that Nebraska

has the lowest per cent of illiteracy, we

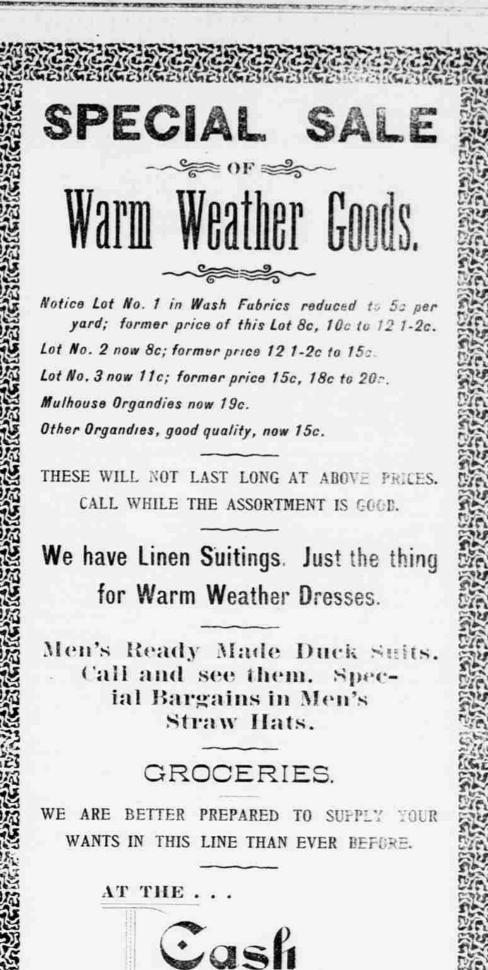
feel that this exhibit is right in keeping

where they can rest and examine the

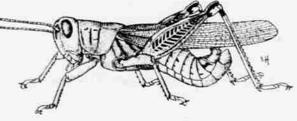
work. You can "Stand up for Nebraska"

up in another building.

Lincoln, Nebraska, July 20, 2898. To Nebraska School People: Many have experienced difficulty in locating the Nebraska Educational Exhibit at the



pan is to be used on sloping ground it should be made as indicated in the illustration to prevent the oil and water from running to one end. The height of the runners will necessary vary from two to eight or ten inches according to the crop to be



THE TWO-LINED LOCUST (MALE

protected and the age of the insects to be captured. The machine may be of any length desired up to sixteen or eighteen feet. If small it can be drawn by hand, but when larger a horse or two is preferable. When full the insects may be removed, a little more oil added, and the machine started. In this way a number of bushels of 'hoppers can be destroyed in a single day. The cost is trifling, and the remedy very effectual.

J. F. GANSCHOW, THE OLD RELIABLE SHOE DEALER, Carries the Largest and Finest

stock of seasonable goods in the Boot and Shoe line to be found in Southwestern Nebraska.

J.F. GANSCHOW, McCOOK, NEBRASKA.

"UNCLE SAM'S NAVY."

This coupon and ten cents get a

"I think DeWitt's Witch Hazel Salve is the finest preparation on the market for piles." So writes John C. Dunn, of Wheeling, W. Va. Try it and you will think the same. It also cures eczema and all skin diseases. A. McMillen, copy of the peerless "Uncle Sam's

Engineer G.R. Johnson "pitch-forked" Trans-Mississippi Exposition; hence this a six-pound carp, this week. Shades of circular. Ike Walton! This exhibit is to be found in the Ga'-

Brakeman George Leach returned, Monday, from seeing the sights of the Trans-Mississippi.

Miss Crowe, a sister of Brakeman Crowe, is over from Oberlin, the guest of Miss Irene Putman.

Special Santa Fe car 219 passed through on 3, Tuesday night, containing the kindergarten up through the State Mr. Walker and party.

Brakeman E. Benjamin returned to work, today, after a lay-off of about a month, from injuries received.

Miss Hattie Varger is visiting her brother Oscar, the company's agent at Hartwell, Nebraska, this week.

Miss Edna Dixon returned home, last Mississippi Exposition, Omaha, is one of the best, if not literally the best, ever Saturday morning, from her visit in Chicago and other eastern points. credit is due to the thousands of educa-

Supt. Campbell went up to Deuver, Monday night on 3. Master George and Stuart McLean accompanied him.

Traveling Auditor W. P. Foreman spent Wednesday and Thursday here on business of the auditing department.

with the high standing our state has at-Jack McNeff came down from Sheritained. dan, Wyoming, first of the week, on a The work is neatly arranged and taste-

short visit to his children and friends. fully decorated. Visitors can find seats Trainmaster J. D. McFarland of Holyoke, Colorado, had business at Western division headquarters, Tuesday evening.

perhaps in no better way than by taking Miss Della Mowbray went down to your friends with you to see this exhibit, Oxford, Tuesday, to visit relatives, and which no doubt is as fine an educational will proceed to Lincoln, Saturday, for a exhibit as was ever put up by any state. similar purpose. W. R. JACKSON,

The Imperial train ran off the track, Monday morning, about a mile and a half west of Beverly, but no special damage was caused. Only two cars got off

the track. The wrecker went up and his visit to Omaha. pulled them on in a short time, delay-

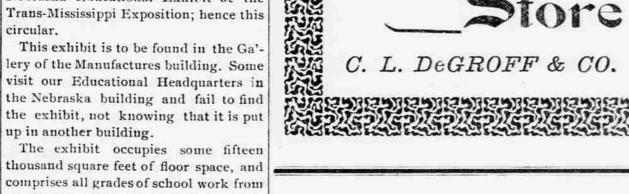
trip. Mr. and Mrs. A. D. Miller went down Stromberg of the west end. to Omaha, Tuesday night, with their little daughter, who was so severely injured in a runaway, some months ago. week. The little one's condition took a sud-

den change for the worse, this week, making it necessary to go to Omaha at her sister home to Denver, Wednesday once for treatment. night.

There are all sorts of rumors regarding The passenger department of the Burprospective changes to be made in the lington has issued the following bulletin running of trains. to conductors: "Passengers are allowed

to carry with them in passenger cars Conductor P. F. McKenna attended only ordinary hand baggage or parcels the bell consecration services in the of small bulk that can be held in the Catholic church at Arapahoe, Wednes-静 hands or placed in the racks in each car day. provided for that purpose, no more space

to be occupied than that to which each was caused by a rail "buckling" on acpassenger is reasonably entitled. Pascount of the extreme heat. The engine sengers will not be permitted to take and two cars were not built to follow the curve made by the "buckle" and ran off with them into the coaches bulky pack-





Bargain

GEO. HOCKNELL, President. B. M. FREES, V. Pres. W. F. LAWSON, Cashier. F. A. PENNELL, Ass't Cash.

A. CAMPBELL, Director. FRANK HARRIS, Director.

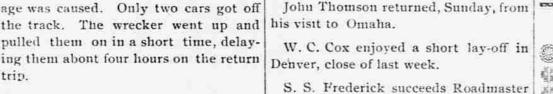
ADDITIONAL RAILROAD NEWS.

Supt. Nebraska Educational Exhibit

ਮੀਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਜੀਵ ਸੰਨਿ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਦੇ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸੰਨਿ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਸ਼ਹਿਰ ਦੇ ਸ਼ਹਿਰ ਸ਼ਹਿਰ V. FRANKLIN, PRESIDENT. Switchman J. H. Patterson indulged 40 in a business visit to Wauneta, this Mrs. Emerson Hanson accompanied

CITIZENS BANK MCCOOK, NEB. OF

. The wreck on the Imperial, this week, Paid Up Capital, \$50,000. Surplus, \$5,000



A. C. EBERT, CASHIER.

++>>THE €++

Machine Oils at McConnell's.	Navy" Portfolios, at THE TRIBUNE		curve made by the "buckle" and ran off	42	DIRECTORS		
	call early before the accortment is	eous articles, or merchandise. Such ar- ticles must be shipped by freight or ex-		25	W F M-FADIAHD	A A FAFAT	
for \$1.25 a year, strictly in advance. Guaranteed Mixed Paint at McMillen's	broken.	press. Every passenger violating the	Wednesday, for Pacific Junction, Iowa,	P H T CHURCH	W.F.McFARLAND, OSCAR CALLIHAN,	A. C. EBERT, C. H. WILLARD.	
Drug Store.		above rule or who upon request shall re- fuse to comply therewith should be re-	on a visit. He will also see the exposi- tion briefly during his absence. Con-	6 P		9	
THE TRIBUNE and The Chicago Inter- Ocean for \$1.35 a year, strictly in advance.	S NUMBER 10.	moved from the coach with the bundles	ductor George Beck will have his run meanwhile.	\$7 @\$\$\$\$\$\$\$\$\$\$	र्मी की दीवरी की की की की की की की की	⁹⁸	